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ABSTRACTS

FIBERS A

A LOOK AT THE RECORD. J. B. Goldberg. Textile Inds. 125: 65, 80, 102-104 (Aug. 1961).
Progress in the development of manmade and natural fibers and further improvements which may be achieved are reviewed. (3893)

STUDIES ON SOLID STATE PHYSICS OF FIBERS. PART 1. RATIO OF LOOP TENACITY OF SINGLE FIBERS. A. Konda and C. Koyama. Bull. Textile Research Inst. (Japan) No. 56: 17-22 (1961). In Japanese (English summary). Through BCIRA 41: 2367 (1961).
Derivation from the stress-strain curve is discussed. (3894)

Natural fibers A1

EXAMINATION OF THE BAST FIBERS FROM THE MALE AND FEMALE CANNABIS SATIVA, LINN. S. C. Khanduri and B. Biswas (Hartcourt Butler Technol. Inst.). Textile Mfr. 87: 272-274 (July 1961).
The result of the examination suggests that under identical conditions of cultivation, growth, harvesting, retting, and preparation, hemp fibers of both sexes are more or less similar in chemical composition, and should, therefore, exhibit similar physical and textile properties. 21 refs. (3895)

COTTON COUNTS ITS CUSTOMERS: THE QUANTITY OF COTTON CONSUMED IN FINAL USES IN THE UNITED STATES. Revised 1958, 1959 and preliminary 1960. Utilization Research Div., Nat. Cotton Council of America, Memphis, Tenn. June 1961. 29 p. Free. (3896)

ASBESTOS THE RAW MATERIAL. Cape Asbestos Fibres Ltd. London, 1961. 31 p. Available from North American Asbestos Corp., Board of Trade Bldg., Chicago 4, Ill.
This booklet on asbestos surveys its history, mineralogical classification, mining, and uses. (3897)

SUPERCONTRACTION OF SOUND AND WEATHERED KERATIN FIBERS. O. A. Swanepoel (So. African Wool Textile Research Inst.). Textile Research J. 31: 618-624 (July 1961).
From studies on the supercontraction of sound and weathered wool and mohair fibers, it is concluded that the second stage of supercontraction results from the exposure of sterically protected hydrogen bonds. This can occur through disulfide exchange in the highly cross-linked zones of the microfibrils. Some of the cystine cross-links are stabilized by weathering so that disulfide exchange is inhibited, and hence much less contraction occurs. (3898)

STUDIES IN QUALITY OF SOME LONG STAPLE COTTONS (GOSSYPIUM HIRSUTUM L.) AS INFLUENCED BY CERTAIN AGRONOMIC FACTORS. A. H. Khan and D. M. Khan. Pakistan Cottons 5: 154-163 (Apr. 1961). (3899)

DETERMINATION OF THE LOSS OF SILK IN SODA BY THE METHOD OF OKU AND SHIMIZU. APPLICATION TO THE STUDY OF SILKS ALTERED BY THE DEVELOPMENT OF MICROORGANISMS. P. Rochas and S. Pierret. Bull. Inst. Textile France No. 92: 101-106 (Jan./Feb. 1961). In French. Through BCIRA 41: 2381 (1961).
Study of the characteristics of raw and degummed silk attacked by microorganisms led to the conclusion that a moderate microbial attack results in decreased dynamometric strength and breaking elongation, the fluidity and soda-loss remaining practically the same. Thus, by measuring the dynamometric strength, the fluidity, and soda-loss of a silk, it may be possible to determine whether it has suffered photochemical, thermal, or chemical degradation, or whether it has been altered by microorganisms. (3900)

PROBLEM OF ELECTRON MICROSCOPIC STRUCTURE OF COLLAGEN FIBERS. K. Hess. Melliand Textilber. 42, No. 3: 305-309 (1961). In German. Through BCIRA 41: 1994 (1961).
After a brief review of the extensive experimental material available for various fibers, leading to the derivation of a generally valid theory of a superstructure in high-polymeric fibers, the author deals with the arguments against application of this theory to collagen and other protein fibers. 26 refs. (3901)

Manmade fibers A2

PROPERTIES AND USES OF THE MANMADE FIBERS. Textile Inds. 125: 105-112 (Aug. 1961).
The chart also includes trademarks and suppliers of the principal manmade fibers. Free single reprints are available from Textile Industries, 806 Peachtree St., N.E., Atlanta 8, Georgia. (3902)

OVERSEAS MANMADE FIBER DEVELOPMENTS. R. J. Richardson and G. D. Wilkinson (Chemstrand Corp.). Textile Inds. 125: 87-92 (Aug. 1961).
This review of recent foreign achievements and future prospects is divided into the following sections: polyolefins, polyamides, textured yarns, cellulosics, profiled fibers, protein fibers, polyesters, graft fibers, polyurethanes and polycarbonates, and polyvinyls. (3903)

IMPROVEMENTS IN POLYPROPYLENE FIBER. Knitter 25: 38-39 (July 1961).
The manufacture and properties of polypropylene are described, and research underway to overcome its limitations is summarized. (3904)

ROLE OF CHEMICAL AND INTERMOLECULAR BONDS IN POLYMER RUPTURE. S. N. Zhurkov and S. A. Abasov. Vysokomol. Soed. 3, No. 3: 450-455 (1961). In Russian. Through BCIRA 41: 2200 (1961).
A comparison was made between the time- and temperature-dependent strength of unoriented, oriented, nonplasticized and plasticized viscose, Kapron, and polyacrylonitrile fibers. It is concluded that the strength of the polymer depends upon the rupture of chemical bonds and only indirectly upon the molecular interaction. (3905)

TIME AND TEMPERATURE DEPENDENCE OF THE STRENGTH OF POLYMER FIBERS. S. N. Zhurkov and S. A. Abasov. Vysokomol. Soed. 3, No. 3: 441-449 (1961). In Russian. Through BCIRA 41: 2197 (1961).
Measurements of the tensile strength of viscose, Kapron, polypropylene, nitrile, and vinyl chloride fibers under various static stresses and at temperatures ranging from +150 to -120° C showed a distinct relationship between the breaking stress, the absolute temperature, and the life period of the fiber under a given load. The constants determining the strength properties were calculated and an activation mechanism for the rupture of the polymer is suggested, according to which the rupture is a time-dependent process developing in the polymer by the action of temperature and mechanical stresses. (3906)

BENDING FATIGUE OF MANMADE FIBERS. H. Noshi, H. Fujimoto, and T. Yoshida. J. Textile Machy. Soc. Japan 14, No. 4: 256-267 (1961). In Japanese (English summary). Through BCIRA 41: 2366 (1961).
Nylon, Terylene, high-tenacity rayon, and ordinary viscose rayon were examined. The fatigue life to repeated stress and to multiple repeated stress on two levels was determined. Miner's hypothesis for metals does not hold for fibers. (3907)

LENGTH CHANGES OF MOISTENED NYLON FILAMENTS AS A TIME REACTION. G. Kunzmann. Faserforsch. u. Textiltech. 12, No. 2: 61-66 (1961). In German. Through BCIRA 41: 1991 (1961).
Using the apparatus described to obtain length-variation curves of filaments varying in thickness, it was found that, although after the first wetting the filaments remained elongated in spite of intense drying, the process soon became reversible. The commencement of length variations is retarded as compared with the water uptake; assuming that the latter is a simple diffusion process, this phenomenon can be interpreted as a viscoelastic time effect. (3908)

COMPARATIVE STUDY OF THE FINE STRUCTURE OF VARIOUS TYPES OF REGENERATED CELLULOSE FIBERS. C. Sella, D. Chaperot, and J.-J. Trillat. C. r. Acad. Sci. Paris 252, No. 16: 2349-2353 (1961). In French. Through BCIRA 41: 2198 (1961).
An electron-microscopic study was carried out with a view to comparing the structure of viscose rayon, traditional rayon staple, and polynosic fiber of the BX type and examining the behavior and resistance of microfibrils of these fibers to acids and alkalis. The method used in the preparation of the fibers is described, the results are discussed and photomicrographs are shown. (3909)

DURAFIL AND SC 28 MODIFIED VISCOSE RAYONS. J. D. Griffiths (Courtaulds Ltd). Textile Merc. 144: 721-722 (May 26, 1961).
Promising developments in the apparel field are discussed. (3910)

TROFIL FILAMENTS. W. Laeis. Melliand Textilber. 42, No. 4: 371-373 (1961). In German. Through BCIRA 41: 2093 (1961).
Monofilaments from low-pressure polyethylene and polypropylene are supplied by the Dynamit Nobel AG under the name of Trofil and Trofil P respectively. The properties and uses of the monofilaments are discussed (fabrics protecting against flies, stretcher and deck-chair coverings, fishing nets, etc.). (3911)

MOLECULAR STRUCTURE AND MECHANICAL PROPERTIES OF POLYETHYLENE TEREPHTHALATE FIBERS. I. M. Ward (Imp. Chem. Inds. Ltd). Textile Research J. 31: 650-664 (July 1961).
In this paper, the application of several techniques of molecular structure determination to polyethylene terephthalate (PET) polymer and fibers will be described. These investigations have been directed partly towards obtaining an understanding of the dynamic mechanical properties of PET and related polymers and partly to the characterization of PET fibers with respect to crystallinity and orientation. 19 refs. (3912)

MANMADE ELASTIC YARNS. T. B. Marshall (E. I. du Pont de Nemours & Co.). Textile Inds. 125: 75-80 (Aug. 1961).
The properties, applications, and processing of Lycra spandex fiber are covered. (3913)

APPLICATION, MEASUREMENT, AND CHARACTERIZATION OF STRETCH IN CHEMICALLY UNFIXED SPINNING THREADS. E. V. Reeves (Courtaulds Ltd). Textile Mfr. 87: 264-266, 269 (July 1961).
In the web spinning of viscose the characterization of stretch distribution is important since it is necessary to stretch the thread by a fixed amount, in order to produce the required orientation in the micro-structure, and also to impose the stretch at the right place and at the optimum rate. The paper deals with methods available for the measurement of thread velocity, since ultimately the measurement of stretch is concerned with measurement of velocity. (3914)

YARN PRODUCTION B

BIRFIELD MIDHURST FIBER AND WASTE OPENER. A. E. Callaghan & Sons Ltd. Textile Merc. 144: 726-728 (May 26, 1961).
Wastes that can be processed with the opener include fly, carpet shearings, sacks, card waste, flax, jute butts, hemp, spinners' waste, garnetting threads and yarns, scrap felt, shoddy off-cuts, carpet off-cuts, and chopped rayon waste. With the addition of a new advanced hopper feed and condensing unit, the opener furnishes an automatically fed preparatory leveling, opening, and condensing plant. Features and operation of the component units are described. (3915)

WOOLEN CONDENSER YARN SPINNING. G. H. Thorndike (Wool Inds. Research Assoc.). Textile Merc. 144: 618, 631 (May 5, 1961).
Large scale blending in condenser spinning, with emphasis on the role played by the carding engine, is discussed. (3916)

WORSTED YARN MANUFACTURE. W. J. Shelton (Thomas Burnley & Sons Ltd). Textile Merc. 144: 292-296, 299 (Mar. 3, 1961).
Modern methods of worsted yarn manufacture and developments in machinery for carding, combing, drawing, and spinning are reviewed. (3917)

FALSE-TWIST CRIMPING PROCESSES. R. E. Ferrans (Brit. Nylon Spinners Ltd). Textile Mfr. 87: 290-291 (July 1961).
Points dealt with in this paper include the methods of false twisting, the various types of heaters, the importance of tension control, the two general methods of producing modified false twist yarns, yarn properties, and end-uses. (3918)

NEW DEVELOPMENT IN PRECISION CUTTING OF FIBERS. W. Muehlenberg. Melliand Textilber. 42, No. 4: 379-381 (1961). In German. Through BCIRA 41: 2094 (1961).
The development of the single-knife precision flock-cutting machine F1 (Doerstling & Co. KG), cutting accuracy and knife treatment, and the mechanism of the machine are described. (3919)

EFFECT OF BLENDING COTTONS OF DISSIMILAR FIBER PROPERTIES UPON SPINNING PERFORMANCE AND YARN QUALITY. W. T. Waters and J. Phillips (Auburn Univ.). Textile Research J. 31: 608-618 (July 1961).
The blending of cottons with dissimilar fiber properties was investigated to determine its effect upon processing performance, spinning performance, and yarn quality in medium and fine count yarns. The effect of grade and cavitomic damage, fiber fineness, staple length, and fiber strength was evaluated. 13 refs. (3920)

Drawing and roving B3

FRANSBACH FLYER. G. Porsche. Melliand Textilber. 42, No. 4: 373-374 (1961). In German. Through BCIRA 41: 2105 (1961).
The flyer (described and illustrated) makes it possible to produce roving bobbins of the same size as before but with a 30% weight increase. The Uster value of the roving is not adversely affected. (3921)

Spinning, winding, twisting B4

DEVELOPMENTS IN WOOL FRAME SPINNING TECHNIQUES. G. H. Thorndike and J. G. Miller (Wool Inds. Research Assoc.). Textile Mfr. 87: 292-293 (July 1961).
In addition to discussing recent innovations and mechanical improvements, this paper also deals with factors to be considered in comparing mules and ring frames. (3922)

NEW VALUE FOR THE PREDICTION OF ENDS-DOWN. A. Keworkian. Faserforsch. u. Textiltech. 12, No. 2: 66-73 (1961). In German. Through BCIRA 41: 1997 (1961).
Comparison of the results from tensile tests on yarns and end-breakage counts during processing shows no direct relationship between the number of ends down and the mean strength. Neither are the linear irregularity and the variation coefficient of yarn strength suitable criteria for its processing behavior. The new term technological irregularity, calculated as the fourth power of the single-value deviations from the mean, leads to a higher correlation with the number of ends down. (3923)

Yarns B5

PRODUCTION OF FANCY EFFECTS DURING CARDING AND DRAWING. N. Primentas. Textile Mfr. 87: 261-263 (July 1961).
Details of fiber mixtures and blends, machine settings, and special attachments employed in carding and drawing to produce knop, slub, flake, and similar novelty yarns. (3924)

HARD TWISTED YARN. PART 4. INNER STRUCTURE OF TWISTED YARN. S. Kakiage. J. Textile Machy. Soc. Japan 14, No. 4: 273-278 (1961). In Japanese (English summary). Through BCIRA 41: 2384 (1961).
The inner structure was studied by observing the longitudinal view of the filaments in a twisted yarn set by super-heated steam in a vacuum oven; two types of filament migration (long and short-periodicity) occur in machine twisted yarn, only one (long-periodicity) in yarn twisted on a twist tester. (3925)

SOFTNESS OF COTTON YARNS AS AFFECTED BY FIBER AND YARN PROPERTIES. E. Honold and J. N. Grant (So. Reg. Research Lab.). Textile Research J. 31: 643-650 (July 1961).
An equation is developed for estimating single-yarn softness from yarn diameter and twist and from fiber maturity. The softness of 2-ply yarns as related to the component single yarns is discussed. For modified cottons, increased fiber friction apparently contributes to the decrease in yarn softness. An equation is developed to estimate the single-yarn diameter from yarn number and twist multiplier. The possibility that the diameter of the 2-ply yarn is related mathematically to the ply yarn twist multiplier and to the softness of the original unplied single yarn is discussed. 11 refs. (3926)

HIGH-BULK ACRYLIC FIBER YARNS IN WOVEN FABRICS. J. B. Hamilton (Courtaulds Ltd). Textile Merc. 144: 717-721 (May 26, 1961).
The essential principles underlying the use of bulked and textured yarns in woven fabrics, with special emphasis on the importance of yarn and fabric structure, are discussed. (3927)

TEXTURED YARNS: DEVELOPMENTS. Textile Merc. (Annual Trade Review Suppl.): 71-72 (Mar. 1961).
Trends in technology and marketing are briefly reviewed. (3928)

COMPARISON OF PARENT AND POST-TREATED FALSE-TWIST NYLON YARNS. T. S. Nutting and K. Vidhani. Textile Merc. 144: 895-898 (June 30, 1961).
The effects of post-treatment temperature as related to the processing temperature of the parent yarn on yarn and knit fabric characteristics are summarized. (3929)

RELATIONSHIP BETWEEN THE STRENGTH OF FILAMENT YARN AND A CORDED STRUCTURE. H. Cripps (Courtaulds Ltd). Textile Mfr. 87: 267-269 (July 1961).
The effects of the following factors on cord strength are examined: cord twist; physical properties of component yarns; surface properties of component yarns; and method of cording. (3930)

FABRIC PRODUCTION C

KNOTS IN TEXTILE YARNS. Textile Merc. 145: 19, 21 (July 7, 1961).
The importance of selecting the proper knot for reducing machine stoppages due to slippage is discussed. Illustrations of various types of knots are included. (3931)

Warping, slashing, yarn preparation C1

WARP TENSION AND STRETCH DURING SIZING. PART 2. N. Akagawa, S. Kazama, K. Shinkai, and T. Nagasaka. Bull. Textile Research Inst. (Japan) No. 56: 45-53 (1961). In Japanese (English summary). Through BCIRA 41: 2319 (1961).
Most of the stretch remains because of stress relaxation not because of the effect of the size; on desizing, up to 5% for viscose yarns and up to 2% for acetate and cotton yarns is recoverable. The tensile strength of continuous-filament yarns is little changed by sizing. (3932)

PREPARATION OF RAYON WARPS. I. M. Raju. Indian Textile J. 71: 370-372 (Apr. 1961).
Pointers on warping and sizing are briefly noted. (3933)

W. H. K. 2 HIGH-SPEED WARPER. W. H. K. Products Ltd. Textile Merc. 144: 435 (Mar. 31, 1961).
The outstanding features of the machine are a unique method of applying self-equalizing pressure to each side of the beam, and a variable time-speed adjustment from standing start to full warping speed and conversely from full warping speed to braking stop. (3934)

SACFEM MODEL 601 SECTION WARPER. Construxione Ferroviarie e Meccaniche SA. Textile Merc. 144: 587-588 (Apr. 28, 1961).
Features and operation of the warper are described. (3935)

MODIFIED BOTTLE BOBBIN WINDING MACHINE. E. Nestel AG. Hosiery Trade J. 68: 143-144 (July 1961).
The use of a contact building motion in conjunction with a short quick traverse movement of the thread guide in order to combine the advantages of coning with those of bottle bobbin winding characterizes the winding machine described. The package has substantially the same shape as the orthodox bottle bobbin package but, instead of a solid core, it has as a foundation a compressible frustum of a cone made of plastic material and covered with polyurethane foam. (3936)

SCHLAFHORST AUTOMATIC CONE AND CHEESE WINDER. Wool Record 99: 1430-1431 (May 12, 1961).
Features and operation of the Schlafhorst Autoconer are described. (3937)

WEAR OF VARIOUS TEXTILE GUIDE MATERIALS. PART 4. EFFECT OF YARN SPEED ON WEAR RATE. K. Fujino, K. Nakajima, and T. Inoue. J. Textile Machy. Soc. Japan 14, No. 4: 268-272 (1961). In Japanese (English summary). Through BCIRA 41: 2382 (1961).
The wear of copper cylinders rubbed by cotton yarn was measured at different yarn speeds; the rate of wear decreases as yarn speed increases. See abstr. 2902/61 for previous part. (3938)

STUDY ON TENSION DEVICE FOR WINDER. PARTS 1 AND 2. T. Sakai and E. Kuze. J. Textile Machy. Soc. Japan 14, No. 4: 243-255 (1961). In Japanese (English summary). Through BCIRA 41: 2317 (1961).
These articles deal with the friction-type tension regulator, where the frictional force produced is independent of the yarn tension (Part 1); dependent upon the yarn tension (Part 2). (3939)

Weaving C2

TERRY LOOMS. A. Meister and M. Ziegler. Melliand Textilber. 42, No. 4: 396-399 (1961). In German. Through BCIRA 41: 2135 (1961).
Various loom constructions and their mechanisms are reviewed. (3940)

PICANOL PRESIDENT HIGH-SPEED AUTOMATIC LOOM. R. S. Maynard. Textile Merc. 144: 749-752 (June 2, 1961).
The manufacture, use, and operation of the President loom are described in detail. (3941)

ROLLER TYPE WARP LETOFF APPARATUS. PART 2. MEASUREMENT OF WARP TENSIONS. F. Kondo, H. Kamogawa, and Y. Hatekeyama. J. Textile Machy. Soc. Japan 14, No. 5: 334-338 (1961). In Japanese (English summary). Through BCIRA 41: 2321 (1961).
Variations in warp tension due to beating were measured on a loom, when started and while running, under different conditions; they were found to be small. See abstr. 2338/60 for Part 1. (3942)

SULZER WEAVING MACHINE. Textile Merc. 144: 579-580 (Apr. 28, 1961).
The present studies on the type of weft packages suitable for the woolen and condenser yarn sectors of the weaving industry indicate that the best weft package is one of 220 mm maximum diameter with a traverse of at most 180 mm; the shape should be either cylindrical, or conical with a taper not exceeding 4° 20′, with a mean empty core diameter of at least 100 mm. Data showing the packages recommended for various yarns and/or counts as an aid to operators and users of Sulzer weaving machines are included. (3943)

MULTICOLOR WEAVING WITH POSITIVE OUTSIDE CAM SHEDDING. George Hattersley & Sons Ltd. Textile Weekly 61 (2): 154, 161 (July 21, 1961).
The positive outside cam shedding can be applied to the Hattersley woolen and worsted looms. It is located outside the loom frame, and positive connection between the machined positive cams through rigid snap-on connectors is designed to ensure that a smooth movement is imparted to the heddle frames. The standard ratios available are tabulated. (3944)

STUDIES ON FATIGUE OF YARN DURING WEAVING. PART 1. LOOM-ACTION TYPE CYCLIC-EXTENSION TESTING MACHINE. PART 2. FREQUENCY DEPENDENCE OF RESIDUAL ELONGATION CAUSED BY THE CYCLIC EXTENSION OF YARN. K. Furusato and T. Osawa. J. Soc. Textile Cellulose Inds. Japan 17, No. 4: 310-315 (1961). In Japanese (English summary). Through BCIRA 41: 2322 (1961).
The machine is described, and tests on viscose rayon yarn are analyzed and discussed. (3945)

SHIPPER MOTION ADJUSTMENTS ON THE X-2, XP-2, XD, AND XP DRAPER LOOMS. Draper Corp. Fibre and Fabric 114: 11-12 (July 1961). (3946)

Knitting C3

ITALIAN STOCKING INDUSTRY REPORT. Brit. Productivity Council. Hosiery Trade J. 68: 84-87 (July 1961).
Summary of a report on productivity and costs in the Italian hosiery industry by a joint management and union team representative of the British hosiery industry. (3947)

NYLON NYSIL STOCKINGS WITH A SILKY HANDLE. Ballito Hosiery Mills Ltd. Hosiery Trade J. 68: 96-97 (July 1961).
Nysil are full-fashioned 15 denier stockings which have been subjected to combined chemical and ultrasonic wave finishing treatment so that they retain all the intrinsic properties of nylon, plus a softer, lighter silkier handle, higher degree of elasticity and recovery, and greater porosity than stockings from standard 15 denier nylon yarn. (3948)

PRACTICAL HINTS FOR KNITTERS. PART 9. CIRCULAR STOCKING MACHINES. Hosiery Trade J. 68: 138-139 (July 1961). (3949)

RECOMMENDED LUBRICATION PRACTICE FOR BANNER SCP AND SCOP HOSIERY MACHINES. P. E. Howard. Textile Inds. 125: 153, 157 (Aug. 1961). (3950)

PHYSICAL PROPERTIES OF BULKED KNITTED FABRICS. PART 1. BULK OF PLAIN KNITTED FABRICS FROM STRETCH YARNS. M. Okamoto and H. Hosomi. Bull. Textile Research Inst. (Japan) No. 56: 55-59 (1961). In Japanese (English summary). Through BCIRA 41: 2395 (1961).
The relation between takeup and bulk was investigated representing bulk by $(l_c - l_m)/l_c \times 100\%$, where l_c is the calculated stitch length, l_m the measured length. (3951)

FUNDAMENTALS OF WARP KNIT ENGINEERING. PART 11. A. Reisfeld (Gehring Textiles, Inc.). Knitted Outerwear Times 30: 9, 21-27 (July 31, 1961).
Factors to be considered in choosing the type of stretch or bulk yarn best suited for the end-use requirements of the fabric contemplated are discussed. (3952)

LOAD-EXTENSION PROPERTIES OF WARP KNITTED FABRICS. D. L. Cook and P. Grosberg (Univ. Leeds). Textile Research J. 31: 636-643 (July 1961).
An expression for predicting the load-extension properties of a loop is derived and utilized to determine to what extent the load-extension properties of warp-knit fabrics are determined by yarn properties and fabric geometry. (3953)

STITCH LENGTH CONTROL IN FF KNITWEAR. Production Advisory Service. Hosiery Trade J. 68: 106-107 (July 1961).
The Wilson stitch length gage allows checks of stitch length in a fabric without the need for unroving, and fabric variations can thus be minimized at the critical knitting point. Its applications are described. (3954)

COMPARATIVE COMFORT PROPERTIES OF KNIT FABRICS FROM BULKED VERSUS CONTINUOUS FILAMENT YARNS. E. R. Kaswell, L. Barish, and C. A. Lermond (Fabric Research Labs.). Textile Merc. 144: 819, 829, 832 (June 16, 1961).
Starting from the assumption that wool and cotton fabrics were comfortable and that flat, smooth continuous filament hydrophobic fabrics were uncomfortable, the physical properties of a series of knitted fabrics were determined. The fabrics studied included wool, cotton, bulked nylon, filament nylon, filament acetate, and filament viscose. The bulked nylon fabric tended to approach the general physical characteristics of cotton and wool knitted fabrics with respect to thickness, weight, opacity, density, packing factor (fabric density/fiber specific gravity), surface character, thermal conductivity, softness, resilience air-permeability, water-absorption and drying time. It resembled the filament nylon fabric with respect to moisture regain and wicking properties. It resembled all of the fabrics with respect to transmission of water vapor and drying rate, except wool, which had a lower drying rate. (3955)

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 68: 132-134 (July 1961).
The following are discussed: knitting machinery exhibited at the Hanover Fair; Swiss apparatus for compiling knitting instructions; and economic trends in hosiery and knitwear industry. (3956)

STIBBE S. B. 99/36 CIRCULAR JACQUARD MACHINE. G. Stibbe & Co. Ltd. Hosiery Trade J. 68: 117 (July 1961).
The S. B. 99/36 is a dogless model with a stationary needle cylinder 30" in diameter, equipped with 36 feeders. (3957)

WILDT-MELLOR BROMLEY 6/RM RIB KNITTING MACHINE. Wildt Mellor Bromley Ltd. Hosiery Trade J. 68: 108-109 (July 1961). (3958)

Fabrics C4

KINDS OF NEPS IN DYED COTTON PIECE GOODS. C. F. Goldthwait, R. L. Wiles, and V. R. von Sales (N. C. State Coll.). Am. Dyestuff Reptr. 50: 544-548, 574 (July 24, 1961).
In order to determine the nature of light-dyed and dark-dyed specks in cotton piece goods, hundreds of dark-dyeing and light-dyeing specks taken from fabrics dyed differentially or by large-scale methods were examined under the microscope. Neps which show as light specks were caused essentially by immature fibers. Many mixed neps contained mature fibers, or fuzz fibers (linters) from fragments of seed coat, but sufficient immature fibers were also present to have (probably) caused the formation of these neps. The dark-dyeing specks were invariably such linters, frequently with bits of seed coat still attached. The general impression was that present-day handling of cotton may have increased the numbers of seed-coat fragments in piece goods, and of fibers freed from them in bleaching, which tend to show as dark specks in dyeing goods. 9 refs. (3959)

MULTIFIBER BLENDS. A. F. Tesi (Celanese Fibers Co.). Textile Inds. 125: 93-96, 100-101 (Aug. 1961).
It is the objective of this article to indicate where and why three-fiber blends have been used, to list various fabrics containing three-fiber blends, and to show how certain fibers contribute toward specific performance characteristics. (3960)

IMPROVE DACRON/WOOL BLENDS. E. G. Sutcliffe (Samuel Hird & Sons). Textile Inds. 125: 81-83 (Aug. 1961).
Mill solutions for problems involved in achieving proper yarn blending, optimum twist insertion, clear-face finishes, and antistatic properties are described. (3961)

BOW AND SKEW. L. Rea and J. D. Robertson, Jr. Am. Dyestuff Reptr. 50: P567-P569 (July 24, 1961).
The difficulties experienced by school sewing classes due to bow and skew in fabrics are discussed by Miss Rea. Mr. Robertson's talk is devoted to the types of fabric distorting influences which occur during fabric manufacture and to the development of an automatic electro-mechanical weft skew and bow detector and straightener. (3962)

DIMENSIONAL CHANGES IN MULTICOMPONENT SYSTEMS OF FABRICS: A THEORETICAL STUDY. J. Lindberg (Swed. Inst. Textile Research). Textile Research J. 31: 664-669 (July 1961).
In a system of two fabrics attached to each other, dimensional changes may give rise to compression and extension stresses in the plane of the fabrics. The paper discusses 3 different types of dimensional change occurring in practice: those due to external stresses, to setting operations, and to releasing frozen-in internal stresses or producing internal stresses by swelling. Equations are derived which, for a smooth system, give the relation between the initial difference in dimension between the fabrics, dimensional changes taking place after the fabrics are attached to each other, and certain mechanical properties of the fabrics. Three fundamental cloth parameters are shown to govern the results: formability, settability, and dimensional stability. 5 refs. (3963)

SOUND WAVE ABSORPTION BY FABRICS. PART 1. ABSORBING MECHANISM. S. Aso and R. Kinoshita. J. Textile Machy. Soc. Japan 14, No. 4: 285-290 (1961). In Japanese (English summary). Through BCIRA 41: 2393 (1961).
The sound absorption coefficient of fabrics of different densities was measured by the tube method; there are two types of absorbing mechanism: viscosity resistance and resonance. Theoretical expressions are derived and discussed. (3964)

NEW SYSTEM DEVELOPED FOR ADHESIVE LAMINATION OF FOAM. Imp. Chem. Inds. Ltd. Knitted Outerwear Times 30: 5 (July 31, 1961).
The Daltoflex system for laminating polyurethane foam to fabrics is a transfer spreading method, based on the use of Daltoflex 28 (a light colored polyurethane elastomer in the form of small chips), and Suprasec G (colorless liquid consisting of a 75% solution of a polyisocyanate in ethyl acetate). (3965)

RELAXATION SHRINKAGE OF WOOL FABRICS: ITS RELEASE WITH REGAIN AND TIME. K. Baird (C.S.I.R.O. Wool Research Labs.). Textile Research J. 31: 624-629 (July 1961).
Relaxation shrinkage occurs in wool fabrics when strains set into the fabric are released, usually by the effects of moisture. In this paper, the dependence of relaxation shrinkage on the amount of moisture added and on the time are examined. It is shown that, for fabrics at various stages of finishing, shrinkage is approximately a linear function of the amount of moisture added, up to the point of fiber saturation. It also appears that shrinkage takes place rapidly, being almost complete within 30 min of spraying with distilled water at room temperature. 9 refs. (3966)

STUDIES ON THE STRUCTURE OF FLEECE MATERIALS. H. Jörder and C. L. Nottebohm. Melliand Textilber. 42, No. 4: 444-449 (1961). In German. Through BCIRA 41: 2207 (1961).
Effects of the fibrous material, manner of producing the fiber fleece, and bonding of the loose fleece by means of a bonding agent on the structure and properties of nonwoven and nonknitted materials are examined, and it is pointed out that the formation of a pronounced lamellar structure stipulates the use of a dispersion of a film-forming bonding agent at a concentration of at least 5%, sufficient wetting of the fibers by means of substances lowering the surface-tension of the dispersion (e.g. fatty alcohol sulfonates, ethylene oxide condensation products or quaternary ammonium compounds) and, if necessary, addition of substances increasing the viscosity of the dispersions, e.g. casein, gelatine, polyvinyl alcohol, methyl cellulose, etc. (3967)

AMERICAN STANDARD PERFORMANCE REQUIREMENTS FOR TEXTILE FABRICS. E. Freedman (Macy's Bur. Standards). Am. Dyestuff Reptr. 50: P557-P566, P569 (July 24, 1961).
This presentation includes a brief outline of events leading up to the promulgation of these standards, their scope, the contribution of the AATCC, the growing impact of these standards on textile manufacturers, distributors, finishers, dyers, retailers and service industries, and the benefits to be derived through adherence to these standards. An example of how the elements of these standards dealing with laundering and drycleaning can be transmitted to the ultimate consumer via Sure Care Symbols is illustrated. 4 refs. (3968)

WOVEN STRETCH. S. M. Suchecki. Textile Inds. 125: 66-70 (Aug. 1961).
The critical problems involved in the designing and finishing of woven stretch fabrics are examined. (3969)

FINISHING D

DYEING AND FINISHING REVIEW. A. J. Hall. Textile Merc. (Annual Trade Review Suppl.): 65-67 (Mar. 1961). (3970)

Chemical processes D1

EPOLENE E FOR TEXTILE FINISHES: CHOICE OF AN EMULSIFIER SYSTEM. Eastman Kodak Co. Dyer 126: 45-47 (July 14, 1961).
The preparation of nonionic emulsions based on Epolene E (polyethylene) and the choice of surface active agents on the basis of the HLB system developed by the Atlas Powder Co. are explained. (3971)

PLASTIC IMPREGNATED TEXTILES. Dohm Ltd. Textile Merc. 144: 693 (May 19, 1961).
By means of the polyethylene dry-powder technique, rotproof, waterproof, wear resistant, and heat sealable fabrics and nonwoven fabrics are claimed. Techniques and applications are briefly described. (3972)

EFFECTS OF BUFFERS ON FORMALDEHYDE-CURING OF AMIDOXIMATE HYDROCHLORIDE OF PARTIALLY CYANOETHYLATED COTTON. M. Negishi, H. Ito, and T. Kuramochi (Gumma Univ., Japan). (Letter to the editor). Textile Research J. 31: 673-675 (July 1961). (3973)

CHEMICAL FINISHES ON TERYLENE. N. B. Smith and W. G. Watson (Imp. Chem. Inds. Ltd). Dyer 126: 57 (July 14, 1961).
The authors briefly review the use of softening agents, antistatic agents, oil and water repellents, water impervious coatings, delusterants, and flock printing agents. (3974)

REACTIVE FINISHES ARISING FROM COMPETITION IN THE TEXTILE INDUSTRY. L.-H. Marcou. Teintex 26, No. 2: 87-107; No. 3: 165-183 (1961). In French. Through BCIRA 41: 2165 (1961).
A bibliography of 54 references on the use of reactive finishing agents for cotton and wool fabrics is reviewed, the respective treatments being described, and the results discussed. (3975)

PROBLEM OF ANTISTATIC PERMANENT FINISHING OF HIGH-BULK ACRYLIC FIBER YARNS FROM POLYACRYLONITRILE FIBERS. K. Mahall. Textil-Praxis 16, No. 3: 279-282 (1961). In German. Through BCIRA 41: 1875 (1961).
A special finishing process with Nonax-975 was developed to retain the voluminous nature of the yarn and to impart to it a permanent soft and woolly handle. The Nonax-finished materials can be dyed with disperse and basic dyes, but only cationic (e.g. Levegal PAN) and nonionic (e.g. Foryl D) assistants should be used, respectively. (3976)

QUALITY AND COSTS AS DETERMINING FACTORS IN THE CHOICE OF MODERN BLEACHING INSTALLATIONS. J. C. Sanchez. Ingenieria Textil 28, Nos. 1 and 2: 13-37 (1961). In Spanish. Through BCIRA 41: 2333 (1961).
With reference to the economic aspects of bleaching, the author discusses the present state of bleaching techniques, factors determining the choice of a bleaching method, effect of the bleaching agent on the bleached article, degree of whiteness, degree of polymerization and tensile strength, nep elimination, hydrophilic properties of cotton fabrics after various bleaching treatments, weight losses, and the effect of manner of bleaching on the quality of the bleached product. (3977)

HOMOGENEOUS ACETYLATION OF CELLULOSE DYED WITH REACTIVE DYES. U. Einsele. Melliand Textilber. 42, No. 4: 427-432 (1961). In German. Through BCIRA 41: 2156 (1961).
Examination of the effect of reactive dyes on the acetylation process in cellulosic fibers showed that the fiber/dye linkage remains unaffected during acetylation. In dyeings with monofunctional reactive dyes, the acetylation rate is relatively little affected even at higher dye concentrations, whereas bifunctional dyes, capable of cross-linking the cellulose, distinctly retard the acetylation reaction. This fact can be used as proof for a chemical cross-linking of cellulose. (3978)

PIECE MERCERIZATION ON CHAINLESS OR CHAIN MERCERIZING MACHINES. H. E. Pierling. Melliand Textilber. 42, No. 4: 451-454 (1961). In German. Through BCIRA 41: 2164 (1961).
The characteristic features of a chainless mercerizing machine are described, with special reference to the automatic tension control in the scouring and stabilizing compartment by means of pneumatically-weighted double-compensator systems; synchronized flow of the material in the whole installation by means of a Leonard set; novel vibrational steam dealkalizer with high dealkalizing effect; a Turbotex neutralizing machine with considerably improved washing effect and increased productivity. (3979)

GRAFT POLYMERIZATION OF ACRYLAMIDE ONTO COTTON FABRIC FOR FURTHER TREATMENTS. H. Kamogawa and T. Sekiya (Textile Research Inst., Japan). Textile Research J. 31: 585-591 (July 1961).
Data on the effects of variables in the graft polymerization of acrylamide on cotton fabric with ceric ammonium nitrate catalyst and on trials to impart durable crease-proofing to the polyacrylamide-grafted fabric by the incorporation of cross-links between graft chains of different cellulose molecules by means of a methylene-bisamide linkage (-$CONHCH_2HNOC$-) are presented. Of the aftertreatments investigated, the acid cure of methylolated polyacrylamide-grafted fabric alone or in conjunction with adipamide offered the best durability to both acid extraction and alkaline launderings. 4 refs. (3980)

CHANGES IN FINE STRUCTURE AND MECHANICAL PROPERTIES INDUCED BY CYANOETHYLATION OF COTTON YARNS. PART 2. REACTED WITHOUT LONGITUDINAL SHRINKAGE. C. M. Conrad, D. J. Stanonis, J. J. Creely, and P. Harbrink (So. Reg. Research Lab.). J. Appl. Polymer Sci. 5: 163-170 (Mar./Apr. 1961).
The present paper reports the results of a study in which the mechanical conditions of reaction prevented any contraction. The results indicate that in spite of the strong tensions developed in the yarns, the reaction proceeds in both the accessible and the crystalline regions with considerable volume expansion and eventual disappearance of crystalline structure. Some improvements were experienced in such properties as tensile strength, tenacity, ultimate elongation, energy of rupture, and immediate elastic recovery. 11 refs. (3981)

PROGRESS IN WASH-WEAR RAYONS. I. H. Welch (Am. Viscose Corp.). Textile Inds. 125: 71-74 (Aug. 1961).
The past history, present status, and future developments in wash and wear rayons are briefly reviewed, and the problems still to be solved are outlined. The author concludes that the high wet modulus rayon fibers seem to offer the greatest hope for the future, either with resins or with the new chemical cross-linking finishes. (3982)

CHEMISTRY OF NEW LATENT CURING SYSTEMS FOR EPOXY RESINS. S. H. Langer, I. N. Elbling, A. B. Finestone, and W. R. Thomas (Westinghouse Elec. Materials Labs.). J. Appl. Polymer Sci. 5: 370-374 (May/June 1961).
New types of catalyst combinations for epoxy resins are described and examples given. These combinations consist of a triethanolamine-chelated titanium compound or phosphorus compound and a borate ester which react to give triethanolamine borate and other epoxy-reactive products. The advantages of these addends as catalysts are ease of mixing with the resin, relatively long tank life (1 to 2 months), good electrical properties at elevated temperatures, and low viscosity where desired. Phosphorus compounds impart fire resistance. 20 refs. (3983)

NEW METHOD OF OBTAINING CELLULOSIC MATERIALS WITH WATER REPELLENT PROPERTIES. N. M. Khvostenko, C. Vei-gan, and Z. A. Rogovin. Zhur. Priklad. Khim. 34, No. 3: 656-659 (1961). In Russian. Through BCIRA 41: 2169 (1961).
Experiments showed that it is possible to produce cotton fabrics with water-repellent properties by surface-esterification of the cellulose with acid chlorides of chlorovalerianic acid. After esterification, the fabric is rinsed first with an organic solvent (to remove excess of the esterification agent), then with water, and dried. The esterification mixture used in the experiments was composed of 50% (by weight) of $Cl(CH_2)_4COCl$ and 50% dimethylamine. (3984)

SELF-SMOOTHING FABRICS: CHLORINE-RETENTION DAMAGE. J. T. Marsh. Textile Mfr. 87: 283-288 (July 1961).
Review of the literature on causes and prevention of chlorine retention damage in crease resistant cellulose fabrics. (3985)

BETTER WAY TO MAKE COTTONS WATER REPELLENT. S. P. Koltun (So. Reg. Research Lab.). Textile Inds. 125: 119, 144-145, 187 (Aug. 1961).
This preliminary cost study shows that it would coat as little as 3.8 cents per yard to treat cotton with silicone alloy, or 5.7 cents per yard to impart the additional property of crease resistance with silicone alloy-triazone at the continuous rate of 120 yards per minute. The alloy is prepared by simultaneously polymerizing tetravinyl silane and methyl hydrogen siloxane in the presence of benzoyl peroxide as catalyst and methyl isobutyl ketone as solvent. The treatment imparts excellent water repellency and crease resistance to cotton and has the additional advantages of low curing time and temperature, no discoloration of fabric, and short processing time. 5 refs. (3986)

DIHYDROXYETHYLENEUREAS AS WRINKLE-RESISTANCE FINISHING AGENTS FOR COTTON. S. L. Vail, P. J. Murphy, Jr., J. G. Frick, Jr., and J. D. Reid (So. Reg. Research Lab.). Am. Dyestuff Reptr. 50: 550-553 (July 24, 1961).
The properties of fabrics treated with some dihydroxyethyleneureas have been studied and compared with fabrics treated with dimethylolethyleneurea (DMEU). 1,3-Dimethyl-4,5-dihydroxy-2-imidazolidinone has been prepared and found to produce wrinkle-resistant cotton fabrics. These fabrics were highly resistant to chlorine damage and had good resistance to acid souring. Wrinkle-resistant fabrics were also produced from 4,5-dihydroxy-2-imidazolidinone. These fabrics, however, were yellowed during curing and were highly susceptible to chlorine damage. 10 refs. (3987)

FORCES IN DETERGENCY. PART 3. J. C. Harris (Monsanto Chem. Co.). Soap Chem. Specialties 37: 53-55 (July 1961).
The relationship of the heats of adsorption of surfactants to the energy value in detergent systems is discussed. (3988)

FRICTIONAL COEFFICIENT OF TEXTILE FINISHING AGENTS. PART 2. RELATIONS BETWEEN THE CHEMICAL STRUCTURE OF SEVERAL CATIONIC AND NONIONIC SURFACTANTS, FRICTIONAL COEFFICIENT, AND HAND OF SEVERAL TEXTILE FIBERS TREATED BY THESE SURFACTANTS. E. Takahashi, S. Nishikawa, M. Koshimura, and T. Tawara. J. Textile Machy. Soc. Japan 14, No. 5: 329-333 (1961). In Japanese (English summary). Through BCIRA 41: 2354 (1961). (3989)

ISOCYANATE MODIFICATION OF WOOL IN DIMETHYL SULFOXIDE. N. H. Koenig (Western Reg. Research Lab.). Textile Research J. 31: 592-596 (July 1961).
In the presence of hot dimethyl sulfoxide, a variety of monoisocyanates penetrate into and react chemically with wool. Dimethyl sulfoxide is superior to pyridine, the only other known reaction medium, in respect to cost, odor, and toxicity. Isocyanate-treated fabrics are more resistant to chemicals and to laundering shrinkage than unmodified fabrics. 10 refs. (3990)

PYROLYSIS OF CELLULOSE AND THE ACTION OF FLAME-RETARDANTS. PART 1. SIGNIFICANCE AND ANALYSIS OF THE TAR. F. H. Holmes and C. J. G. Shaw (Shirley Inst.). J. Appl. Chem. 11: 210-216 (June 1961).
A study has been made of the pyrolysis of different cottons in vacuum, and in dry air, mainly at 418° and the products have been fractionated and analyzed. From a purified cotton cellulose, the main products are a combustible tar and water, but when a flame-retardant is present less tar and more gas and carbonaceous residue (char) are produced. The tar is highly flammable, consists mainly of levoglucosan, and is a major factor in the burning of cotton. There is a correlation between the amount of tar formed and the flammability of the cotton. It is concluded that for a treated cotton cellulose material to be flame-resistant the amount of tar formed on pyrolysis must be small. 17 refs. (3991)

HANDLING OF BURLAP. Nat. Inst. of Drycleaning, Silver Spring, Md. June 1961. 2 p. Bull. FF-82.
Precautions in handling burlap during drycleaning are noted. (3992)

Dyeing and printing D2

FEATURES OF CROSS-DYEABLE ACRYLIC FIBERS. C. Reichman. Knitted Outerwear Times 30: 3 (July 31, 1961).
The major differences between the cross-dyeing methods for Orlon 44/Orlon 42 and Acrilan 16.56/Acrilan 16 are described. (3993)

DYEING OF MANMADE FIBERS WITH REMAZOL DYES. W. Hacker. Textil-Praxis 16, No. 3: 269-272 (1961). In German. Through BCIRA 41: 1923 (1961).
Dyeing of polyamide and base-modified polyacrylonitrile fibers (Acrilan, Creslan, and Leacril) with Remazol dyes is discussed. Special reference is made to the trisodium phosphate process, in which the Remazol dye (present as β-hydroxyethyl sulfo-sulfuric acid ester) is converted by treatment with 2 g/l trisodium phosphate into its reactive vinylsulfo-form. (3994)

DYEING OF VINYLON WITH SOLACET DYES. PART 3. DYEING WITH BINARY MIXTURES. A. Katayama, N. Kuroki, and K. Konishi. J. Soc. Textile Cellulose Inds. Japan 17, No. 4: 354-359 (1961). In Japanese (English summary). Through BCIRA 41: 2339 (1961).
Dye absorption was studied over a wide range of concentrations and temperatures. Affinities and heats of dyeing are determined by thermodynamic treatment. (3995)

FUTURE OF VISCOSE SPIN AND DOPE DYEING. T. Flanagan (Brit. Enka Ltd). Textile Merc. 144: 331-332 (Mar. 10, 1961).
The main methods of incorporating pigments into viscose and their technical and economic limitations and advantages are briefly reviewed. (3996)

WOOL MODIFICATION DURING DYEING. G. H. Lister (Sandoz Ltd). Dyer 126: 25-26 (July 14, 1961).
In the conditions present in a dyehouse and in scouring, the cystine groups appear to be more sensitive than is generally believed although at the same time it is permanent set, arising from alkaline conditions, which appears to modify the working properties of wool to a greater extent than actual chemical decomposition of the fiber. (3997)

TRENDS IN ENGLAND IN THE DYEING OF NYLON/COTTON HOSE. H. White (Malna Hosiery Co.). Hosiery & Underwear 44: 60-62, 74 (July 1961).
The dyeing of nylon/cotton hose in England is discussed with reference to some of the types of dyestuff used and the various procedures. Reference is also made to the introduction of reactive dyes for both nylon and cotton and the increasing importance of automatic hosiery dye-boarding machines. The merits of the Procinyl/Procion reactive dyes are discussed in relation to the better established disperse dyes, with brief reference to some of the dyeing problems associated with the dye-boarding machines. (3998)

NEW PRINCIPLE OF DYEING SAMPLES FROM KNITTED AND WOVEN MATERIALS. H. vom Hove. SVF Fachorgan Textilveredlung 16, No. 1: 51-54 (1961). In German. Through BCIRA 41: 1922 (1961).
In order to obtain level and crease-free dyeings on 10 x 10 cm woven or knitted samples (from polyamide, polyester, polyacrylonitrile, etc. fabrics), the latter are sewn by hand or machine on to V4A wire netting (8-10 mesh/sq cm), which is then rolled into a cylinder and screwed together by means of two V4A screws. The samples prepared in this manner are prewashed and dyed in a glass cylinder, beaker or specially constructed dyeing apparatus. During the treatment, they can be moved up and down by means of a cam and agitator motor. The same principle can be used for larger samples, in which case the wire/fabric piece is screwed on to a cylinder and treated in a V4A-box which can be closed with a removable lid. For English version, see abstr. 3033/61. (3999)

STANDFAST PROCESS FOR LONG RUNS. A. Ogden (Standfast Dyers & Printers Ltd). Textile Merc. 144: 542-543 (Apr. 21, 1961).
The advantages of the Standfast molten metal vat process with and without the addition of a padding mangle are briefly noted. (4000)

EVALUATION OF THE AFFINITY OF DISPERSE DYES FOR POLYESTER FIBERS BY MEANS OF DYEING BY THE WATER/ALCOHOL SYSTEM AND THERMODIFFUSION THROUGH FOILS. H. Hendrix. Melliand Textilber. 42, No. 4: 432-438 (1961). In German. Through BCIRA 41: 2157 (1961).
The experiments described were carried out with a view to studying the effect of dye solubility in the dye-bath on the dye absorption of polyester fibers from a water/isopropanol system, and determining by thermodiffusion the migration rate of the individual dyes through a number of closely-packed polyester foils. (4001)

EFFECT OF BENZOIC ACID AS CARRIER DURING EQUILIBRIUM DYEING OF POLYESTER FIBERS WITH DISPERSE DYES. M. Jagrova and J. Rais. Textil 16, No. 3: 109-111 (1961). In Czech. Through BCIRA 41: 2158 (1961).
The distribution of some disperse dyes between the polyester fiber and water was examined, and empirical formulas were derived for expressing the decrease of the distribution coefficient with increasing benzoic acid concentration, on the one hand, and for determining the water-solubility of the dye as a function of benzoic acid concentration, on the other. A relationship was found for the equilibrium saturation concentration of the dye in the fiber and in the solution. On the basis of these relationships, an attempt is made to elucidate the mechanism according to which the benzoic acid affects the dyeing process. (4002)

RATE-OF-DYEING EQUATION IN THE FINITE DYE BATH. PART 4. NOTES ON CRANK'S APPROXIMATE FORMULA. K. Tsuda. Bull. Textile Research Inst. (Japan) No. 56: 61-64 (1961). In Japanese (English summary). Through BCIRA 41: 2340 (1961). (4003)

METHOD FOR TESTING DYEINGS ON POLYACRYLONITRILE FIBERS. W. Pelz and D. Janneck. Faserforsch. u. Textiltech. 12, No. 3: 118-121 (1961). In German. Through BCIRA 41: 2378 (1961).
Experiments have shown that it is possible to test the levelness of dyeings on polyacrylonitrile fibers in the laboratory by means of the potassium permanganate method, since there is a similarity between the $KMnO_4$-treated samples and the batches dyed with the usual dyes. The method is described. For sectioning, the treated fibers are embedded in paraffin melting at 56° C. (4004)

CHEMISTRY OF REACTIVE DYES FOR CELLULOSE FIBERS. O. K. Balakrishnan (Univ. Madras). Indian Textile J. 71: 366-369 (Apr. 1961).
The Remazol, Cibacron, and Procion dyes are covered. 4 refs. (4005)

PRINTING ON POLYAMIDE AND POLYESTER FIBERS. R. Ruf. Melliand Textilber. 42, No. 3: 317-320 (1961). In German. Through BCIRA 41: 1932 (1961).
The range of acid dyes for printing polyamide fabrics has been supplemented by a selection of Dimacide dyes and of Amichrome dyes (2:1-metal complex dyes containing no water-soluble group). Polyester, polyester/wool, polyester/cotton, or polyester/viscose fabrics can be printed with Esterophile dyes in all cases where it is possible to fix the dye by means of steam under pressure or by the Thermosol process. (4006)

DEVELOPMENTS IN PRINTING POLYESTER/COTTON AND POLYESTER/WOOL. G. Bertolina and A. Broggi. Melliand Textilber. 42, No. 4: 449-451 (1961). In German. Through BCIRA 41: 2163 (1961).
The thermosol-thermofix method for printing polyester/cotton fabric is described. Optimum conditions for obtaining fast prints are pointed out, together with a selection of especially suitable disperse and reactive dyes. A new method, based on the use of leuco esters of vat dyes together with small amounts of disperse dyes is described for printing polyester/wool fabrics. Bright and fast shades are thereby obtained; the excellent lightfastness of light shades and the good crocking and sublimation fastness of dark shades are stressed, in particular. (4007)

PRINTING GLASS FABRICS. Lisbon Textile Prints, Inc. Textile Inds. 125: 84-86, 100 (Aug. 1961).
Mill screen printing procedure is briefly outlined. (4008)

Mechanical processes D3

WEFT STRAIGHTENING DURING FINISHING. Qualitex Electronische Apparatenfabriek NV. Textile Weekly 61 (2): 102, 104, 106 (July 14, 1961).
The Qualiflits is a simple device which makes woven or printed patterns visible on the cloth at high speeds. It can be mounted on tenters, equalizers, and sanforizing machines, and functions as a visual checking apparatus in conjunction with a weft straightener. Its operation is described. (4009)

SCHREINER FINISHING FOR WARP KNITS. Textile Merc. 144: 888-889 (June 30, 1961).
The types of Schreiner finish calenders and techniques used are briefly described. (4010)

RAISING WARP-KNITTED NYLON FABRICS FOR UNBROKEN LOOP FINISH. Brit. Nylon Spinners Ltd. Textile Merc. 144: 831-832 (June 16, 1961).
Three sequences, each producing a finish with a slightly different characteristic, are described: napping in loomstate, after fabric preparation, and after dyeing. (4011)

Drying, setting, conditioning D4

GROWTH KINETICS OF SHRINKAGE STRESSES IN DRYING SYSTEMS. M. S. Ostrikov, N. D. Vitkevich, and O. D. Svirskaya. Kolloid Z. 23, No. 1: 122-124 (1961). In Russian. Through BCIRA 41: 2171 (1961).
An empirical formula is proposed, expressing the time-dependent shrinkage forces in drying systems with varying physico-chemical and structural-mechanical properties as a function of the properties of a given material and drying conditions. Comparison of the curves with experimental data showed that the equation describes fully the development of the shrinkage stresses during drying of systems with different composition and structure. (4012)

TESTING AND MEASUREMENT E

RECENT APPLICATIONS OF ELECTRON MICROSCOPY TO THE STUDY OF THE CRYSTALLIZATION AND MORPHOLOGY OF NATURAL AND SYNTHETIC POLYMERS. J.-J. Trillat and C. Sella. Bull. Inst. Textile France No. 92: 35-90 (Jan./Feb. 1961). In French. Through BCIRA 41: 2456 (1961).
Recent improvements in techniques and apparatus used in electron microscopy are reviewed and application of the latter to the study of synthetic polymers (morphology of the macromolecular structure, chemical modifications brought about in some polymers by radiochemical grafting reactions, polymerization in the solid state) and natural and regenerated textile fibers (microstructure of keratin, wool, cotton, rayon, polynosic fibers, etc.) is discussed. 10 refs. (4013)

Fibers E1

ELECTRON MICROSCOPIC INVESTIGATION OF THE FIBRIL STRUCTURE OF SILK FIBERS. M. Minagawa. J. Soc. Textile Cellulose Inds. Japan 17, No. 4: 335-340 (1961). In Japanese (English summary). Through BCIRA 41: 2380 (1961).
Degummed fibers (domestic and wild) were examined while being broken down with hydrogen peroxide or sodium hydroxide. Electron micrographs are shown and fibril dimensions are given. The middle layer of the domestic fibroin is less resistant to chemicals than the outer and inner layers. (4014)

CONVERTING THE FIBROGRAPH TO AUTOMATIC DIRECT-READING OPERATION. P. R. Ewald and S. Worley, Jr. (U.S. Cotton Quality Labs.). Textile Research J. 31: 602-607 (July 1961).
This paper describes relatively simple modifications which permit use of the same instrument as a manual, an automatic curve-drawing, or an automatic dial or digital-type Fibrograph according to the cotton fiber length measurements needed. 8 refs. (4015)

STUDIES IN METHODS OF STAPLE MEASUREMENT AND INTRODUCING A UNIFORM METHOD AT VARIOUS RESEARCH STATIONS. A. H. Khan, A. M. Memon, and I. Afzal. Pakistan Cottons 5: 139-147 (Apr. 1961).
Results obtained by Halo or Butterfly, Tuft, and Fibrograph methods over a 2 year period were compared, and recommendations on the use of the methods are given. 15 refs. (4016)

BULK COMPRESSIONAL CHARACTERISTICS OF FIBER MASSES. PART 2. TEST CONDITIONS AND EVALUATIONS OF COMPRESSIONAL CHARACTERISTICS. M. Takikawa and K. Kawamura. J. Soc. Textile Cellulose Inds. Japan 17, No. 4: 301-309 (1961). In Japanese (English summary). Through BCIRA 41: 2365 (1961).
The compressional index, expressed in terms of compression energy, resilience, and fatigue ratio (ratio of the energy of deformation in the first and second cycles), shows good agreement with handling test results. See abstr. 3642/61 for Part 1. (4017)

MEASUREMENT OF THE MODULUS OF DYNAMIC ELASTICITY OF STAPLE FIBERS. H. G. Weyland (Central Research Inst. A.K.U.). Textile Research J. 31: 629-635 (July 1961).
A description is given of an apparatus with the aid of which the modulus of dynamic elasticity of fibers can be determined at about 1000 cycles/sec as a function of the strain. In principle the dynamic elasticity constant of the fiber is determined by measuring the resonance frequency of a cantilever spring which is loaded with the fiber. The results of measurements on various types of natural, regenerated, and synthetic fibers are given. 5 refs. (4018)

FURTHER SIMPLIFICATIONS OF THE VIBRAWEIGH METHOD. G. F. Bush (G. F. Bush Associates). (Letter to the editor). Textile Research J. 31: 670-671 (July 1961). (4019)

QUANTITATIVE METHOD FOR DETERMINATION OF REGENERATED CELLULOSE FIBER IN BLENDS WITH COTTON. M. Gralinski. Prace Inst. Wlok. 10, No. 2 (34): 1-21 (1960). In Polish. Through BCIRA 41: 2199 (1961).
Of the quantitative methods for analyzing cotton/regenerated cellulose blends reviewed, two methods were selected to test on various cotton varieties. The optimum method was selected after a series of control analyses on blends with known composition. The results were found to depend upon the composition of the blend and the cotton quality, but there was no distinct correlation between the accuracy of the results and the method of analysis. The method is briefly described. (4020)

CHARACTERIZATION OF DIFFERENT TYPES OF POLYAMIDE FIBERS BY INFRARED SPECTROGRAPHY. P. Bouriot. Bull. Inst. Textile France No. 92: 93-99 (Jan./Feb. 1961). In German. Through BCIRA 41: 2376 (1961).
The infrared spectra of fibers from polyamide 6, 66, 7, and 11 differ distinctly from each other in the region between 1,500 and 850 cm^{-1}, and certain characteristic features of these spectra can be attributed to the CO-NH groups and to the equal numbers of CH_2-groups. Between 3,500 and 1,500 cm^{-1}, the spectra are very similar indicating that their association energy due to hydrogen-bonding is comparable. The spectrum of polyurea fiber in this region differs from that of the polyamides examined; this is probably due to a different arrangement of the structural elements responsible for the hydrogen-bonding. (4021)

Yarns E2

F-METER: A DEVICE FOR MEASURING YARN FRICTION. H. Güttler and R. Benz. Melliand Textilber. 42, No. 4: 374-379 (1961). In German. Through BCIRA 41: 2205 (1961).
The F-meter, a new device for determining the friction coefficient on the running thread, consists of two capacitive thread-tension measuring devices and an analogue computer, which, according to the known rope-friction formula, calculates the friction coefficient from the thread tensions in front of and behind a friction point in dependence of the looping angle. The continuous calculation and registration of the friction coefficient and its variation (even on very short yarn sections) offer new testing possibilities. (4022)

DETERMINATION OF THE DEGREE OF SETTING IN CRIMPED YARNS FROM POLYAMIDE-6 FIBERS AND IN THEIR PRODUCTS. K. Schwertassek and V. Dufek. Textil 16, No. 4: 143-146 (1961). In Czech. Through BCIRA 41: 2388 (1961).
The degree of setting was determined on the basis of the critical solution temperature and iodine absorption, respectively. The latter method gives values for short fiber sections of textured yarns to which false twist has been imparted. (4023)

SUDDEN TENSILE STRESS AND ITS EXAMINATION IN STRETCHED TEXTILE THREADS. J. Lünenschloss. Textil-Praxis 16, No. 2: 182-187; No. 3: 282-290 (1961). In German. Through BCIRA 41: 1998 (1961).
No conclusions can be drawn from the results of a normal tensile test as to the behavior of yarns to impact-like stresses. The materials examined (cotton, polyester, and polyamide) react differently and the degree of elongation affects the ratio of tensile to impact kinetic energy. Experiments at different elongation rates show, moreover, that as compared with the tensile kinetic energy, the impact kinetic energy decreases with increasing elongation rate of polyamide and polyester fibers. (4024)

Fabrics E3

ANALYTICAL STUDY ON TEXTILE CONSTRUCTION. PART 1. I. Fujishima. J. Textile Machy. Soc. Japan 14, No. 5: 339-349 (1961). In Japanese (English summary). Through BCIRA 41: 2390 (1961).
The numbers of fundamental weaves are given by $Wf = (n - 1)l/rl(n - r)l$, and of derivative weaves by $Wd_1 = (n - 1)l/rl(n - r)l$ or $Wd_2 = (n - 1)l/rl(n - r)lm$, where n and m are the number of ends and picks per repeat, r is the number of stitchings (warp floats) per repeat, $r < n$, $r < m$, $n \neq m$. (4025)

CLEANING CLOTHS FOR MACHINES. German Standards Comm. Melliand Textilber. 42, No. 4: 412 (1961). In German. Through BCIRA 41: 2213 (1961).
The draft specification DIN 61 651 defines the technical conditions for the supply of cleaning cloths (material, weave, strength, oil-absorbability, size, etc.). The DIN methods for testing the cloth are enumerated. (4026)

SIMPLE OPTICAL INSTRUMENT FOR THE MEASUREMENT OF COURSES OR PICKS PER INCH IN MOVING FABRICS. H. E. Knobil. Reply: D. Wilson. (Letters to the editor). J. Textile Inst. 52: P218-P219 (May 1961). (4027)

TESTING OF TEXTILES: TENSILE TEST ON TEXTILES (GRAB TEST). German Standards Comm. Melliand Textilber. 42, No. 4: 413-414 (1961). In German. Through BCIRA 41: 2210 (1961).
The draft specification DIN 53 858 describes the manner of taking the sample, number of samples and their preparation, conditioning, number of single tests, apparatus, testing conditions and method for determining the strength of fabric by means of the grab test. When evaluating the test, the mean grab-strength, the mean grab wet-strength, and the ratio of the latter to the former are taken into consideration. (4028)

VARIABLE-PRESSURE MICROMETER FOR MEASURING FABRIC THICKNESS. J. Henno and R. Jouhet. Bull. Inst. Textile France No. 92: 106-111 (Jan./Feb. 1961). In French. Through BCIRA 41: 2392 (1961).
The automatic device described, which can be used for measuring the resilience of pile fabrics and the compressibility of fabrics with increased apparent volume (e.g. Banlon), operates with an accuracy of 0.01 mm under controlled pressure variable from 1-100 g/sq cm. The fabric is not damaged during testing. (4029)

TEXTILES: DETERMINATION OF LENGTH AND WIDTH OF KNITTED MATERIALS. Swiss Standards Assoc. Textil-Rundschau 16, No. 3: 128-129 (1961). In German. Through BCIRA 41: 2004 (1961).
The Swiss specification SNV 98 4 16 describes sampling and sample preparation, and the method for determining the length and width of knitted materials in flat and tubular form. (4030)

PREPARATION OF FABRIC CROSS-SECTIONS AND SURFACE IMPRESSIONS FOR MICROSCOPIC EXAMINATION BY MEANS OF CELLULOSE ACETATE PLATES. N. van der Burgh. Tex 20, No. 4: 157-163 (1961). In Dutch. Through BCIRA 41: 2391 (1961).
The new method described is based on the use of Triacel (cellulose acetate); the transparent material is easily cut into two 10 x 30 mm plates (1 mm thick) and covered on one side for 5 min with a layer of acetone to produce swelling. A 7 x 25 mm fabric piece is introduced into a beaker with acetone and placed in a vacuum desiccator. After about 1 hr, the fabric is sandwiched between the two acetone-swollen surfaces of the Triacel plates, clamped between two alligator clips and cut with a microtome. The Triacel material can also be used for the replica technique. 18 refs. (4031)

EXPERIMENTAL WEAR TESTS OF TEXTILE PRODUCTS. L. Sobieraj. Prace Inst. Wlok. 10, No. 2 (34): 52-68 (1960). In Polish. Through BCIRA 41: 2211 (1961).
Methods for carrying out wear tests with outer- and underwear materials are reviewed. A special technique is described for examining suits, shirts, underwear, and pullovers. The number of specimens necessary for the investigations is calculated and various methods of grading are discussed. The possibility of applying the variance analysis to the evaluation of test results is pointed out in particular. (4032)

SOME ASPECTS OF THE WASH-AND-WEAR PROBLEM. J. Lindberg (N.C. State Coll.). (Letter to the editor). Textile Research J. 31: 671-673 (July 1961).
The author presents arguments against the use of crease recovery measurements for evaluating wash-and-wear performance. (4033)

CONTRIBUTION TO THE MULLEN BURSTING PRESSURE TEST. EFFECT OF MEMBRANE THICKNESS DURING TESTING OF PAPER. H. Jacobsen. Papier, Darmstadt 15, No. 3: 77-80 (1961). In German. Through BCIRA 41: 2216 (1961).
Experiments showed that membranes of the same quality, but differing within a certain thickness range, do not give the same results during the Mullen test. The possible differences and the methods by means of which they can be eliminated are pointed out, and single means for testing the membranes are described. (4034)

Other E4

USE OF OSCILLOGRAPHIC POLAROGRAPHY IN TEXTILE TESTING. O. Koldinsky and J. Bartak. Textil 16, No. 4: 147-149 (1961). In Czech. Through BCIRA 41: 2342 (1961).
The method described can be used for testing commercial products used for wash-and-wear finishing and for distinguishing qualitatively between different heat-hardenable resin precondensates. (4035)

TEXTILES: QUANTITATIVE DETERMINATION OF THE RESIN CONTENT IN FINISHED TEXTILES. Swiss Standards Assoc. Textil-Rundschau 16, No. 3: 126-127 (1961). In German. Through BCIRA 41: 2012 (1961).
The Swiss specification SNV 95 6 49 describes the preparation of the sample, apparatus and reagents, and the method for the quantitative determination of urea-formaldehyde, thiourea-formaldehyde, cyclic ethylene-urea-formaldehyde, and melamine-formaldehyde condensation products, applied to textiles for improving their shrinking, creasing, and swelling properties. In the test report, the acid-soluble portion is given as percentage weight loss of the initial, absolutely dry sample, after it has been washed according to the specification. (4036)

LACTIC ACID/UREA METHOD FOR THE QUANTITATIVE DETERMINATION OF UREA/FORMALDEHYDE AND MELAMINE/FORMALDEHYDE RESINS IN REGENERATED CELLULOSE FABRICS. F. Kocevar. Textil-Rundschau 16, No. 3: 109-114 (1961). In German. Through BCIRA 41: 2011 (1961).
The fabric is boiled for 1 hr in the reflux condenser with lactic acid and urea, the liquid is drained off, and boiling repeated for another hour with fresh urea/lactic acid solution. The fabric is then rinsed with hot and cold water until disappearance of the acid reaction, dried at 105° C to constant weight, cooled in the dessicator and weighed. The amount of resin is calculated as percentage addition to the dry weight of the untreated fabric. (4037)

MODIFICATIONS TO A COLORIMETRIC METHOD FOR DETERMINING DICHLOROPHEN. F. C. Ashton. Analyst 85: 685-686 (Sept. 1960). Through BCIRA 41: 2221 (1961).
In the method of Gottlieb and Marsh (Summary, 1946, p. 169) for determining phenolic antiseptics on textiles, potassium periodate is used in place of potassium ferricyanide as oxidizing agent in conjunction with the 4-aminoantipyrine reagent solution. (4038)

MEASUREMENT OF FRICTION BETWEEN RUBBER-LIKE POLYMERS AND STEEL. D. I. James (Rubber & Plastics Research Assoc.). J. Sci. Instr. 38: 294-299 (July 1961).
A machine for measuring the coefficient of friction between a flat sheet of polymeric material and a ground steel plate is described in detail. 12 refs. (4039)

USE OF PAPER CHROMATOGRAPHY IN THE IDENTIFICATION OF 1:2-METAL COMPLEX DYES AND FLUORESCENT BLEACHING AGENTS. P. Miro. Investigacion e Informacion Textil 3, No. 4: 295-302 (1960). In Spanish. Through BCIRA 41: 2008 (1961).
Solvent mixtures are enumerated, by means of which it is possible to separate and identify metal-complex dyes and optical brightening agents. The chromatograms of the latter are evaluated in UV light. In the identification of wool dyes, attention must be paid to the alkalization of the concentrated acetone solution and evaporation of the aqueous pyridine solution, used for stripping the dye from the fiber, to a small volume. (4040)

IGNITION TEMPERATURES OF PLASTICS. G. A. Patten (Dow Chem. Co.). Modern Plastics 38: 119-122, 180 (July 1961).
The use of the hot-air ignition furnace (developed by N. P. Setchkin, Nat. Bur. Standards) provides the means of determining the ignition susceptibility and actual use hazard of plastics. 4 refs. (4041)

MILL MANAGEMENT F

MODERN TEXTILE MANAGEMENT. PART 6. N. L. Enrick. Textile Inds. 125: 113-115 (Aug. 1961).
The development and use of sales anticipation curves as an aid in management's coordination of sales, production schedules, and inventory buildups are described. (4042)

COST COMPONENTS OF MANUFACTURED WOOL TEXTILE PRODUCTS. M. Fead. Textile Merc. 144: 856-861, 866 (June 23, 1961).
The results of a study made in Australia of the costs added to raw wool in the various stages of processing up to the point of sale of the finished product are summarized. 5 refs. (4043)

Industrial engineering F1

ORDER HANDLING SYSTEM. Pyramid Mfg. Co. Textile Inds. 125: 149-151, 171 (Aug. 1961).
Basis of the system is an Ormig electronic selective spirit duplicator with unlimited selective ability. All data required to process an order are written just once on a single master. The machine creates all necessary papers and directives from this master. (4044)

PREVENTION OF ACCIDENTS IN TEXTILE MILLS WITH PARTICULAR REFERENCE TO LOOM SHEDS. J. P. Singhal. Indian Textile J. 71: 358-363 (Apr. 1961).
The main causes of accidents in the loom shed and measures for their prevention are summarized. (4045)

WOOL PROCESSING AND STREAM POLLUTION. J. W. Masselli, N. W. Masselli, and M. G. Burford (Wesleyan Univ.). Textile Inds. 125: 121, 128, 132, 137, 142-144 (Aug. 1961).
It is shown that natural impurities extracted from the wool (wool wax and suint), soap, carding oils, and acetic acid produce practically all of the BOD from the wool industry. The natural impurities may be removed through solvent recovery and soap may be replaced by low-BOD detergent or sulfuric acid. Acetic acid may be replaced by ammonium sulfate and low-BOD carding oils (emulsified mineral oil, polyalkylene glycols) may replace the high-BOD oils usually used. These changes can reduce BOD loads by 60 to 90%. (4046)

COTTON PROCESSING AND STREAM POLLUTION. J. W. Masselli, N. W. Masselli, and M. G. Burford (Wesleyan Univ.). Textile Inds. 125: 120, 122-128 (Aug. 1961).
The data included in this report indicate that pollution reduction through substitution of low-BOD process chemicals is feasible and practical. The most important chemical which must be replaced is the high-BOD starch used for slashing. 8 refs. (4047)

MEANS AND POSSIBILITIES OF SOLVING THE EFFLUENT PROBLEMS IN THE TEXTILE FINISHING PLANT. R. Sell. Melliand Textilber. 42, No. 3: 342-346 (1961). In German. Through BCIRA 41: 2016 (1961).
Mechanical, chemical, and biological methods for effluent purification and the respective installations are reviewed. (4048)

Plant and equipment F2

SILENT MOUNTINGS FOR NOISY TEXTILE MACHINERY. P. W. Sherwood. Textile Mfr. 87: 275-277 (July 1961). Can. Textile J. 78: 59-61 (July 21, 1961).
The various types of dampers employed in minimizing vibration and the basic relationships to be observed between dampers and foundations are discussed. (4049)

AIR RIGHT HEATING AND VENTILATING SYSTEM. Air-Right Ltd. Hosiery Trade J. 68: 98-100 (July 1961).
In place of sheet metal ducting with outlet grilles the Air-Right system uses fabric filter and diffuser tubes to distribute all air handled by the plant. The air velocity through the tube surface is less than one-tenth that of the velocities used with steel duct and frille systems, assuring complete freedom from drafts. The fabric tubes also act as filters and can be designed to completely filter atmospheric fog. (4050)

IMPROVED FOG AND DUST FILTRATION UNIT. Hall & Kay Ltd. Textile Merc. 144: 514 (Apr. 14, 1961).
Advantages of the PB air filter unit are noted. (4051)

TEXTILE MACHINERY SURVEY. Textile Merc. (Annual Trade Review Suppl.): 33-63, 74-77, 89, 92 (Mar. 1961).
Review of developments during 1960. (4052)

HOW TO GET THE MOST OUT OF YOUR WATER-SOFTENING SYSTEM. R. E. Hinich (Allis-Chalmers Mfg. Co.). Am. Dyestuff Reptr. 50: 554-555 (July 24, 1961).
Steps for assuring satisfactory operation of zeolite water softening systems are outlined. (4053)

SCIENCES G

Chemistry G1

INFLUENCE OF LACTONES ON THE DETERMINATION OF CARBOXYL GROUPS IN CELLULOSE. O. Samuelson and B. Törnell. Svensk Papperstidn. 64, No. 6: 198-203 (1961). Summary in BCIRA 41: 2224 (1961). (4054)

INVESTIGATIONS INTO THE RELATIONSHIP BETWEEN ALKALI SOLUBILITY AND SHORT-CHAIN CONTENT OF NATIVE AND REGENERATED CELLULOSE. B. Philipp and R. Jacob. Faserforsch. u. Textiltech. 12, No. 3: 94-105 (1961). In German. Through BCIRA 41: 2434 (1961).
Results obtained in two research stations by examining the effects of zinc oxide additions and of various pretreatments of cellulose preparations on their alkali solubility are compared, and measurement of the degree of polymerization on extracts obtained under varying dissolution conditions and findings during development and testing of a method for determining the short-chain proportion by fractionation with zincate-containing NaOH are discussed. 23 refs. (4055)

DETERMINATION OF CARBONYL GROUPS IN HYDROCELLULOSE. K. Christofferson and O. Samuelson. Svensk Papperstidn. 64, No. 6: 195-197 (1961). Through BCIRA 41: 2225 (1961).
A comparison was made between the carbonyl content, determined according to Geiger and Wissler (Summary, 1946, p. 257), and the degree of polymerization (determined osmotically) for samples of hydrolyzed cotton. (4056)

NEW METHODS OF MODIFYING THE PROPERTIES OF CELLULOSE. Z. A. Rogovin. J. Polymer Sci. 48: 443-456 (Dec. 1960). Through BCIRA 41: 2418 (1961).
Special attention is given to the synthesis of new esters and ethers, the introduction of new functional groups, and the synthesis of graft copolymers. 27 refs. (4057)

EFFECT OF INORGANIC COMPONENTS ON THE RUPTURE OF THE C-C LINKAGE DURING THERMAL DECOMPOSITION OF CELLULOSE. O. P. Golova, Y. V. Enshtein, and L. I. Durynina. Vysokomol. Soed. 3, No. 4: 536-540 (1961). In Russian. Through BCIRA 41: 2436 (1961).
Inorganic salts, contained in or introduced into the cellulose, promote under the action of heat the rupture of the C-C bonds, leading to the formation of decomposition products. The thermal degradation of cellulose depends also upon the chemical nature of the anion and is probably due to the catalytic activity of the salts. It may be assumed that the salts have a similar effect on other natural and synthetic polymers with polar groups in the elementary chain of their macromolecules. (4058)

SPECTROCHEMICAL INFRARED EXAMINATION OF CHARACTERISTIC GROUPS AND CROSS-LINKAGES IN STYLON. D. Kuznicka-Rydzewska. Prace Inst. Wlok. 10, No. 2 (34): 34-43 (1960). In Polish. Through BCIRA 41: 2201 (1961).
The methods, developed for determining the characteristic absorption spectra and cross-linkages in Stylon polyamide fibers, make it possible to detect structure differences in dependence of the production method and utilization of the fiber, to determine qualitative changes in the degree of crystallinity, and to identify the fibers. (4059)

UNIFORMITY OF SUBSTITUTION DURING THE EMULSION XANTHATION OF CELLULOSE. R. H. Cornell (Inst. Paper Chem.). J. Appl. Polymer Sci. 5: 364-369 (May/June 1961).
This investigation is concerned with the uniformity in substitution for viscose prepared by the emulsion xanthation technique and two factors believed to influence the uniformity--namely, the degree of xanthation and the time of xanthation. 16 refs. (4060)

STUDY OF THE PROCESS OF PHOTOCHEMICAL DECOMPOSITION OF CELLULOSE IN AIR. O. B. Zapol'skii. Vysokomol. Soed. 3, No. 3: 376-381 (1961). In Russian. Through BCIRA 41: 2248 (1961).
Irradiation of regenerated cellulose (Cellophane films) with UV rays was found to result in the rupture of glucoside linkages, whereby part of the absorbed light quanta produces oxidation of the alcohol groups. The results obtained lead to the conclusion that the C = O groups present in cellulose initiate the photochemical reaction. (4061)

STRAINING BEHAVIOR OF CELLULOSE ACETATE PLASTICS. K. Ito. Modern Plastics 38: 129-133, 183 (July 1961).
The relationship between flow strain and deformation strain of cellulose acetate plastics is examined for various conditions of working and annealing temperatures, magnitude of worked strain, rate of tensile strain, and amount of plasticizer. 9 refs. (4062)

INFLUENCE OF THE INITIATOR ON THE GRAFTING OF POLYVINYL POLYMERS. G. Smets, J. Roovers, and W. van Humbeek (Univ. Louvain). J. Appl. Polymer Sci. 5: 149-152 (Mar./Apr. 1961).
The dependence of grafting on the type of initiator was examined in the case of 3 polymer-monomer systems: polystyrene-methyl methacrylate, polymethyl methacrylate-vinyl acetate, and polyethyl α-chloroacrylate-vinyl acetate. The different initiators used were benzoyl peroxide, azobisisobutyronitrile, di-tert-butyl peroxide, and tert-butyl hydroperoxide. 9 refs. (4063)

CAST FLEXIBLE URETHANE POLYMERS. C. H. Smith and C. A. Peterson. Modern Plastics 38: 125-127, 181 (July 1961).
Results of an investigation on the effect of molecular structure on physical and electrical properties of polyester-based cast urethane polymers are presented. (4064)

STRUCTURE OF FEATHER KERATIN. W. T. Astbury and E. Beighton (Univ. Leeds). (Letter to the editor). Nature 191: 171-173 (July 8, 1961).
A structure for feather keratin is proposed, and the experimental basis for the proposal is presented. 14 refs. (4065)

STRUCTURAL AND MECHANICAL PROPERTIES OF PROTEIN FIBERS. N. V. Grigor'eva, V. A. Pchelin, and P. A. Rebinder. Dokl. Akad. Nauk S. S. S. R. 137, No. 4: 889-892 (1961). In Russian. Through BCIRA 41: 2203 (1961).
The effect of tanning agents on the properties (especially elongation) of gelatin fibers (obtained by spinning a 40% aqueous solution into a saturated ammonium sulfate solution and stretching the filament ribbon by 700%) was studied as a function of instantaneous stresses. The results are presented graphically. (4066)

CRYSTALLIZATION IN WOOL KERATIN. A. Skertchly (Univ. Leeds). Nature 191: 138-141 (July 8, 1961).
The relationship of the degree of hydration of keratin to the type of crystallization observed is examined. 23 refs. (4067)

Physics G2

MECHANISM OF FRICTION IN TEXTILE FABRICS. B. Behre (Swed. Inst. Textile Research). Svenska Nationalkommitten for Mekanik, Reologisektionen. Medd. 3: 2-13 (1960).
Since the yarns in a woven fabric are subjected to bending more frequently and more intensely than to other types of deformations, the discussion is mainly devoted to the character of this yarn bending process and its effect on the frictional forces and the resultant deformation within textile fabrics. (4068)

RELATION BETWEEN FRICTION AND SURFACE MICROTOPOGRAPHY. J. D. Huffington (Brit. Jute Trade Research Assoc.). Research 14: 193-195 (May 1961).
The way in which the frictional force (or the real area of contact) between surfaces varies with load depends for elastic or viscoelastic deformation on the surface microtopography. The nature of this relationship is considered theoretically leading, it is suggested, to a method which might usefully be applied in practice to the examination of surfaces. (4069)

DYNAMIC MECHANICAL TESTING OF POLYMERS. G. C. Karas and B. Warburton. Brit. Plastics 34, No. 3: 131-137; No. 4: 189-193 (1961). Through BCIRA 41: 1761 (1961).
In the first part of this paper the fundamentals of non-destructive dynamic mechanical testing of polymers are reviewed (24 refs). Typical methods are described in the second part (27 refs). (4070)

METHOD FOR MEASURING ELECTROSTATIC CHARGES ON FIBERS. B. Kubiak. Prace Inst. Wlok. 10, No. 2 (34): 22-32 (1960). In Polish. Through BCIRA 41: 2195 (1961).
In this review, the author discusses the theory of static electricity, the difficulties in fiber processing associated with this phenomenon, and preventive measures. In the experimental part, methods for measuring the electrical conductivity of fibers and electrostatic charges are described. 23 refs. (4071)

STUDIES ON ELIMINATION OF STATIC. PART 4. RELATION BETWEEN SHIFT OF STATIC AND CHARACTERISTICS OF SURFACE. N. Murasaki. J. Textile Machy. Soc. Japan 14, No. 5: 350-359 (1961). In Japanese (English summary). Through BCIRA 41: 2368 (1961).
Electrification of textiles is controlled by the bias voltage of the surface. Frictional electrification (metal and textiles) is studied. (4072)

THERMAL NEUTRON IRRADIATION OF COTTON. F. A. Blouin, J. C. Arthur, Jr., R. S. Orr, and V. J. Ott (So. Reg. Research Lab.). Textile Research J. 31: 597-602 (July 1961).
Neutron irradiation produced chain cleavage, carboxyl groups, and reducing groups in the cellulose. The wet and dry strengths and the elongation of the cottons were decreased by neutron irradiation. The reducing groups produced in the neutron-irradiated cottons were markedly different from those in periodate-oxidized cottons. A close similarity between the effects of thermal neutron and gamma ray irradiation on cotton was observed. 22 refs. (4073)

CHEMICAL BASIS OF COLOR VISION. W. A. H. Rushton. New Scientist 10: 374-377 (May 18, 1961). Through BCIRA 41: 2452 (1961). (4074)

MISCELLANY H

REVIEWING THE 45TH KNITTING ARTS EXHIBITION. PART 2. Knitter 25: 30-35, 50-58 (July 1961). (4075)

TEXTILE INSTITUTE CONFERENCE ON BULKED YARNS, HARROGATE, ENGLAND. Knitted Outerwear Times 30: 46-49 (June 26, 1961).
The following papers are summarized: Bulked and stretched yarns of nylon 66 produced by the false twist process, by K. Vidhani and T. S. Nutting; Knitting of bulked and stretch yarns, by S. Fitton and J. C. Hopkinson; Factors affecting the properties of fabrics knitted from bulked and stretch yarns, by D. L. Mundon, J. J. F. Knapton, and C. D. Frith; Study of the comparative comfort properties of nylon bulk-yarn knitted fabrics with those prepared from cotton, wool, and continuous-filament manmade fiber yarns, by E. R. Kaswell, C. A. Lermond, and L. Barish; False-twist yarns: relationship between yarn and fabric properties, by L. Cotton and M. G. Bladon. (4076)

SECOND CONFERENCE OF TEXTILE FINISHING GROUP OF TEXTILE INSTITUTE, BUXTON. Textile J. Australia 36: 306-308, 359 (Mar. 20, 1961).
Abstracts of the following are given: Bleaching, by F. V. Davis; and Chlorite bleaching of cotton, by R. S. Higginbotham and R. A. Leigh. (4077)

TEXTILE QUALITY CONTROL ASSOCIATION, SPRING MEETING. Textile World 111: 42-43 (July 1961).
Highlights. (4078)

FLAX AND THE MANMADE FIBERS. S. A. G. Caldwell. Textile Merc. 144: 581, 584-585 (Apr. 28, 1961).
Efforts being made to reduce the cost of flax and linen processing in order to bridge the price gap between linen and competing cotton and manmade fiber textiles are summarized. (4079)

MARKET OPPORTUNITIES FOR COLOR. A. N. Adlman (Werner Textile Consultants). Am. Dyestuff Reptr. 50: P525-P526 (July 10, 1961).
The author discusses the results of marketing studies which have indicated that color is one of the dominating consumer motives for purchase at point of sale. (4080)

MARKETING STRATEGY: FRAMEWORK OF MAJOR MANAGEMENT DECISIONS. D. L. Brier (Werner Textile Consultants). Can. Textile J. 78: 56-58 (June 23, 1961).
See abstr. 2623/61. (4081)

TEXTILE-CHEMICAL EDUCATION: POSSIBILITIES AND PROBLEMS. E. Brunnschweiler. Textil-Rundschau 16, No. 2: 64-69 (1961). In German. SVF Fachorgan Textilveredlung 16: 98-107 (1961). In German. Through BCIRA 41: 1779 (1961).
The education and training of textile technologists in Switzerland (as compared with that in Germany, England, France, and America) and problems of the Swiss institutions are discussed. (4082)

PRODUCTIVITY IN COTTON TEXTILE MILLS. V. Krishnamurthi. Indian Textile J. 71: 318-320 (Mar. 1961).
The factors affecting productivity are discussed. (4083)

MANUAL OF THE TEXTILE INDUSTRY OF CANADA 1961. Canadian Textile Journal Pub. Co. Ltd, 223 Victoria Ave., Westmount, Montreal 6, Quebec. May 1961. 334 p.
Contains articles on the technology and economics of the Canadian textile industry, machinery developments, and textile research. A buyers' guide section, textile chemical specialties listing, mill directory, and a textile technical and trade association directory are also included. (4084)

EXPERT WITNESS IN ARBITRATION AND LITIGATION. J. B. Goldberg. Modern Textiles Mag. 42: 47-51 (July 1961).
The author relates some anecdotes to show that the expert witness, when properly qualified and well-trained, can be of considerable assistance in arbitration and court proceedings. (4085)

TEXTILE CONSUMPTION AND DEGREE OF PROSPERITY. F. W. Meijer. Tex 20, No. 4: 151-154 (1961). In Dutch. Through BCIRA 41: 2462 (1961).
The effect of changes in the prosperity on the consumption of textiles and the short-term aspects of this relationship are studied, with particular reference to the situation in Holland. (4086)

DANISH TEXTILE INSTITUTE. Tidsskr. Textiltek. 18, No. 10: 161-164 (1960). In Danish. Through BCIRA 41; 2072 (1961).
This is the first annual report on the activities of the new Danish Textile Institute after the merger with the Danish Textile Technical School on April 1, 1959. The research programme included work on heat insulating properties of textiles, weatherfastness of dyeings, various measuring methods, etc. New industrial technical services and a new information service were introduced. (4087)

RESEARCH FOR SALES. J. Lindberg (N. C. State Coll.). Am. Dyestuff Reptr. 50: P520-P522, P524 (July 10, 1961).
The role of textile research in selecting fiber materials and building fabric constructions suitable for further manufacturing and consumer use is examined. (4088)

TEXTILE WORLD FACT FILE ISSUE 1961. Textile World 111, No. 7M: 1-324 (Mid-July 1961).
Mill reference data are presented under the following categories: manufacturing, chemical treatment and finishing, and engineering. A buyer's guide with a classified list of companies supplying the textile industry is included. (4089)

TERMINOLOGY AND ECONOMIC IMPORTANCE OF SILKS. W. Böhme. Deut. Textiltech. 11, No. 2: 71-72 (1961). In German. Through BCIRA 41: 1584 (1961).
A proposal is made to introduce a uniform terminology with a view to eliminating confusion between the terms silk (Seide) and yarn (Garn). The term silk is to be used with reference to threads consisting of elementary filaments (natural or manmade) and yarn for threads produced by spinning staple fibers. (4090)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Natural fibers A1

ROLLER COTTON GIN. Continental Gin Co. BP 859 902, Jan. 25, 1961. Through BCIRA 41: 2095 (1961).
Construction whereby vibration is greatly reduced, lubrication of the bearings is more efficient, and settings are more accurately made. (4091)

DECORTICATING MACHINE FOR PINEAPPLE FIBERS. E. Almassy and D. Y. Arenson (South Africa). BP 871 850, July 5, 1961. (4092)

COTTON CLEANING APPARATUS. F. D. Sawyer and W. A. Schaich. USP 2 990 585, July 4, 1961.
Cleaner for use with field harvesting units for effecting initial separation of cotton lint from dirt, trash, and empty bolls. (4093)

Manmade fibers A2

METHOD OF PRODUCING HOLLOW SYNTHETIC FILAMENTS. W. Behm (to Institut für Textiltechnologie der Chemiefasern). BP 859 325, Jan. 18, 1961. Through BCIRA 41: 2099 (1961).
Hollow mandrels are inserted in the bores of the nozzle through which the molten material is extruded and air is blown or sucked through the mandrels at varying pressures. Hollow filaments, varying in the cross-section of the cavity, are thus produced; they are suggested as heat-insulating and padding materials, and also for effect threads. (4094)

TUBULAR TEXTILE FIBERS. Trikotfabriken J. Schiesser AG. BP 859 814, Jan. 25, 1961. Through BCIRA 41: 2100 (1961).
Tubular fibers of a uniform wall thickness are made by the extrusion of a melt or solution through a ring-like nozzle having occasional reinforcing radial bridges. (4095)

POLYVINYL ALCOHOL FIBERS RESISTANT TO HEAT. T. Osugi, M. Matsumoto, K. Tanabe, K. Matsubayashi, and Y. Hirano (to Kurashiki Rayon KK). BP 860 337, Feb. 1, 1961. Through BCIRA 41: 2103 (1961).
The usual loss of dye affinity associated with heat treatment and reaction with acetal to make the fibers resistant to heat is overcome by adding polyvinyl pyrrolidone to the spinning solution. (4096)

POLYVINYL ALCOHOL FIBERS. T. Tomonari and M. Akaboshi (to Air Reduction Co. and Kurashiki Rayon Co. Ltd). USP 2 988 802, June 20, 1961.
Method of wet spinning fibers of improved tensile strength and heat resistance consisting of a core of unoriented structure and a crystalline skin. (4097)

ALL-SKIN VISCOSE RAYON. B. A. Thumm (to Am. Viscose Corp.). USP 2 989 410, June 20, 1961.
The addition of ethylene diamine to the spinning bath is claimed. (4098)

YARN PRODUCTION B

SPINNING OIL. Hoyt Metal Co. of Great Britain Ltd. BP 858 863, Jan. 18, 1961. Through BCIRA 41: 2110 (1961).
Textile fiber (wool, goat hair, cotton) is lubricated for spinning with an aqueous emulsion of a textile oil containing about 5% of an organophilic bentonite, that is a product of the base-exchange reaction between a sodium-type bentonite or similar clay with a higher alkyl-ammonium halide, marketed as Bentone. (4099)

IMPROVING THE PROCESSING OF POLYESTERS. NV Onderzoekingsinst. Research. BP 859 220, Jan. 18, 1961. Through BCIRA 41: 2111 (1961).
Difficulties in the carding and combing of fiber of the Terylene type are overcome by mangling the fiber with a dilute solution of caustic soda containing a surface-active agent, followed by washing and drying. (4100)

CONTINUOUS STUFFER BOX CRIMPING OF THERMOPLASTIC YARNS. F. Scragg (to E. Scragg & Sons Ltd). BP 872 496, July 12, 1961.
The process consists in continuously withdrawing the yarn from a supply source, injecting it into a stuffer box crimper, setting the crimp by heating and cooling, passing it through a zone where a predetermined degree of contraction is permitted, heating to reorient the molecular structure, and winding on a takeup package. (4101)

FALSE TWIST CRIMPING METHOD. NV Onderzoekingsinst. Research. BP 872 665, July 12, 1961.
A more uniformly distributed crimp than usual is obtained in the false twist method by permitting the yarn to shrink at least 7% in the zone between the yarn supply mechanism and false twisting device. (4102)

APPARATUS FOR HEAT STRETCHING SYNTHETIC FILAMENTS. Algemene Kunstzijde Unie NV. BP 872 807, July 12, 1961.
Threading-up is facilitated and waste reduced by carrying out the operation while the feed roll, draw roll, and winding are at rest. The winding device and draw roll are then driven so that the filament is taken up while the feed roll rotates freely so that no stretching occurs until the feed roll is put into operation. (4103)

STUFFER BOX CRIMPING APPARATUS. A. Robinson and M. W. Alford (to Brit. Celanese Ltd). BP 873 368, July 26, 1961.
The filaments are forcibly fed by nip rollers into a confined space from which their emergence is resisted so that the filaments are crimped under the pressure developed. (4104)

CRIMPED VISCOSE FIBERS. J. O. Smith and B. C. Gardner (to Courtaulds Ltd). USP 2 986 446, May 30, 1961.
Method of extruding viscose to form fibers with a high degree of permanently recoverable crimp and having a cross-section part of which has a smooth exterior and mainly a skin structure, the remainder having a lobel periphery and a core structure. (4105)

TOW CONDITIONING APPARATUS. J. P. Richeson and R. C. Jackson (to Chemstrand Corp.). USP 2 986 912, June 6, 1961.
Apparatus for continuously annealing tow by treatment with a pressurized fluid. (4106)

APPARATUS FOR THE PREPARATION OF COTTON WOOL BALLS. W. Kistler (Switzerland). USP 2 987 781, June 13, 1961.
See abstr. 2886/60 (BP 829 582). (4107)

FALSE TWIST CRIMPING APPARATUS. N. E. Klein (to Deering Milliken Research Corp.). USP 2 987 869, June 13, 1961.
Apparatus for simultaneously processing two strands of yarn so that each strand acts to insert false twist in the other. (4108)

SLACK ROLL LIFTING DEVICE FOR YARN PROCESSING. G. Manning (to Cocker Mach. & Foundry Co.). USP 2 988 798, June 20, 1961. (4109)

YARN CRIMPING PROCESS. E. C. Atwell (to Burlington Inds.). USP 2 988 799, June 20, 1961.
Continuous method of imparting crimp to thermoplastic filaments by subjecting them to controlled pressure of meshed, internally heated crimping rolls. (4110)

HEAT STRETCHING APPARATUS FOR LOW SHRINKAGE POLYETHYLENE TEREPHTHALATE THREADS. F. Kleekamm and E. Siggel (to Vereinigte Glanzstoff Fabriken AG). USP 2 988 866, June 20, 1961. (4111)

METHOD OF HANDLING A PLURALITY OF YARNS DURING PROCESSING. G. F. Quittner (to Industrial Rayon Corp.). USP 2 988 867, June 20, 1961.
The yarns are subjected to false twisting to permit their being processed as a unitary bundle and separated subsequently as individual yarns. (4112)

TOW CRIMPING APPARATUS. C. H. Goodwin and W. R. McKelvy, Jr. (to Chemstrand Corp.). USP 2 990 584, July 4, 1961.
Means for forming crimps in successive portions of advancing tow and for simultaneously moistening and heating the deformed portions by steam. (4113)

APPARATUS FOR DRAW-STRETCHING AND WINDING YARN. J. V. Keith (to Leesona Corp.). USP 2 990 603, July 4, 1961. (4114)

FALSE TWIST CRIMPING AND TEXTURING APPARATUS. C. B. Kingsbury (to North Am. Rayon Corp.). USP 2 990 670, July 4, 1961.
Heat setting device for controlling the texture of the yarn without affecting the amount of crimp. (4115)

PROCESS FOR HEAT TREATMENT AND LUBRICATION OF POLYETHYLENE TEREPHTHALATE FILAMENTS. K. E. MacCormack (to Imp. Chem. Inds. Ltd). USP 2 990 604, July 4, 1961.
Lubricant for use in treating filaments and yarns in sliding contact with a hot metal surface (e.g. during drawing, relaxing, crimping, or heat setting) consists of an aqueous solution containing a polyethylene oxide condensate, an antistatic agent, and a boundary lubricant. (4116)

Carding and combing B2

SUCTION DEVICE FOR THE PNEUMATIC REMOVAL OF WASTE FROM CARDS. Luwa AG. BP 856 821, Dec. 21, 1960. Summary in BCIRA 41: 1847 (1961). (4117)

TOP COMB CARRIER FOR NASMITH COMBER. J. J. Rieter & Cie AG. BP 859 423, Jan. 25, 1961. Summary in BCIRA 41: 2117 (1961). (4118)

PRODUCTION OF TEXTILE YARNS. H. Catling, A. E. De Barr, and A. Linnert (to British Cotton Industry Research Assoc.). BP 859 514, Jan. 25, 1961. Through BCIRA 41: 2114 (1961).
The invention relates to a reorganization of the carding process in which operations from the production of a picker lap to the feeding of the drawframes are made continuous. (4119)

CARD FLATS. V. van den Abeele. BP 860 417, Feb. 1, 1961. Through BCIRA 41: 2115 (1961).
A rigid clothing for card flats comprises blades of hard material provided with teeth and longitudinal heels held in slotted mounting plates made of plastic. The blades are embedded in the plates while these are being molded. (4120)

LAP FORMING MACHINES. R. Ormerod (to T. M. M. (Research) Ltd). BP 861 097, Feb. 15, 1961. Through BCIRA 41: 2112 (1961).
To initiate the buildup of a fiber lap, a hollow, perforated lap roller is used and suction is applied from within. The suction is automatically cut off when the leading edge of the new lap is attached to the roller and automatically resumed when the next lap is to be formed. (4121)

CLEARER ASSEMBLIES FOR THE STRIPPING BRUSHES OF CARD FLATS. F. Greenhalgh (to Philipson & Co. Ltd). BP 861 166, Feb. 15, 1961. Through BCIRA 41: 2116 (1961).
To avoid dismounting the clearer in order to clean it, it is supported in spring-loaded socket devices so that it may be turned away from the stripping brush into a position in which the operative can reach its cleaning surface. (4122)

LAP FORMING MACHINES. R. H. Woodhead and J. Osbaldeston (to T. M. M. (Research) Ltd). BP 861 340, Feb. 15, 1961. Through BCIRA 41: 2113 (1961).
Means for accelerating the lap driving rollers in order to sever the lap when a predetermined length has been wound up, and means for restoring the working speed before a new lap is started. (4123)

FIBER FEEDING APPARATUS. A. V. Moody, Sr. (to James Hunter, Inc.). USP 2 983 325, May 9, 1961.
Apparatus for delivering measured amounts of fibrous stock to carding engines. (4124)

NEEDLE ARRANGEMENT FOR CYLINDRICAL COMBS OF RECTILINEAR COMBING MACHINES. J. J. Rieter & Cie AG. BP 872 151, July 5, 1961.
Consecutive needle bars have progressively increasing numbers of needles per unit length. The needles of a following strip are aligned opposite the spaces between the needles of the preceding strip. (4125)

APPARATUS FOR TRASH REMOVAL FROM CARDING ENGINES. J. B. L. Summerscales (to Carrier Eng. Co. Ltd). BP 872 288, July 5, 1961. (4126)

SLIVER FORMING APPARATUS FOR USE IN CARDING MACHINES. P. S. Paterson (to Saco-Lowell Shops). BP 872 937, July 12, 1961. (4127)

CARDING MACHINE FOR PRODUCING SAMPLE SLIVERS FOR TESTING PURPOSES. C. H. Goodwin and W. R. McKelvy, Jr. (to Chemstrand Corp.). USP 2 986 778, June 6, 1961. (4128)

CLEANING DEVICE FOR THE TOP COMB OF COMBING MACHINES. C. Lettermann (to Soc. Alsacienne de Constructions Mecaniques). USP 2 986 779, June 6, 1961. (4129)

CARD DOFFING MECHANISM. K. Kawashima (Japan). USP 2 987 779, June 13, 1961.
The doffing mechanism consists of a suction roller and top roller arranged to form an air current zone to produce a sliver of highly parallel fibers and minimum neps. (4130)

AUTOMATIC SLIVER CAN CHANGING APPARATUS. S. Noda (to Howa Kogyo KK). USP 2 988 785, June 20, 1961. (4131)

CALENDER ROLL MOUNTING FOR CARD COILER HEAD. C. L. Norton and R. V. Cochran (to Dan River Mills). USP 2 990 586, July 4, 1961. (4132)

Drawing and roving B3

TOP ROLL CARRIER FOR DRAWFRAMES. Soc. Alsacienne de Constructions Mecaniques. BP 859 924, Jan. 25, 1961. Through BCIRA 41: 2119 (1961).
The pivoted arms that carry the rollers are adjustable in a slideway with associated positioning means and spring-loaded guides, so designed that changing of the location of a roller on the arm (to suit a change of staple length) can be done without a special tool and particularly without resorting to screws. (4133)

TOP DRAFTING ROLL SUPPORT AND WEIGHTING. W. H. Watson and S. L. Cole (to T. M. M. (Research) Ltd). BP 860 273, Feb. 1, 1961. Through BCIRA 41: 2118 (1961).
The arbor of a single-boss upper roller is offset from the longitudinal axis of the support arm, so that the requisite pressure is applied through a lever action of the support, this supporting the boss resiliently. (4134)

HYDRAULIC OR PNEUMATIC TOP DRAFTING ROLL SUPPORT AND WEIGHTING ARM. W. Ulbricht, W. Morgner, and O. Steinmetz (to VEB Spinnereimaschinenbau). BP 873 253, July 19, 1961. (4135)

TOP DRAFTING ROLL CARRIER. SKF Kugellagerfabriken GmbH. BP 872 238, July 5, 1961.
A carrier arm which can be used for varying fiber lengths makes use of individually weighted guide arms for receiving the top rolls. The guide arms are of different lengths and have interchangeable weighting means. (4136)

AUTOMATIC DOFFING MECHANISM FOR GILLING MACHINES. Deutscher Spinnereimaschinenbau and Schubert & Salzer Maschinenfabrik AG. BP 872 954 and 872 955, July 19, 1961.
The doffing takes place in 2 stages: the package is first shifted to the winding roller close to the delivery tray until the empty tube is placed in position and then falls into the delivery tray (872 954). Electromagnetically controlled swiveling arms carry and place the empty tube between two winding rollers (872 955). (4137)

WIPERS FOR THE TOP DRAFTING ROLLS. J. J. Rieter & Cie AG. BP 873 155, July 19, 1961.
The wiper blade bears against and rests on the cylindrical surface of the roll so that the torque imparted to the blade by the frictional engagement between the blade and the drafting roll presses the blade against the drafting roll. (4138)

GILL BAR ADJUSTABLE NEEDLE SUPPORT. G. A. Köhler (Germany). USP 2 985 923, May 30, 1961. (4139)

CLEARERBOARD FOR DRAFTING ROLLS. W. B. Barfield and H. W. Beaver (to Springs Cotton Mills). USP 2 987 780, June 13, 1961.
Pivotally oscillating underclearerboard with curved front and back edges to reduce overlap of the board beyond its adjacent rolls and minimize the formation of rows of lint and loose fibers on the clearerboard. (4140)

Spinning, winding, twisting B4

SPINDLE SUPPORTING AND GUIDING MEANS IN WINDING, TWISTING, AND DOUBLING MACHINES. L. V. M. Rochegude (France). BP 855 178, Nov. 30, 1960. Through BCIRA 41: 1611 (1961).
The end of the spindle fits into an arcuate slot or groove in a guide member that is clamped on a supporting rod, the slot being concentric with the rod. (4141)

DEVICE FOR AUTOMATICALLY STOPPING DELIVERY OF ROVING AND YARN. S. Ackroyd. BP 855 923, Dec. 7, 1960. Through BCIRA 41: 1859 (1961).
A device for preventing singles comprises a plate furnished with pins or teeth (comb fashion) and pivoted to a bracket that is secured by a spring to a yarn guide on the machine. Normally, the pins or teeth are out of the path of the two ends but if a break occurs the broken end engages them and moves them into the path of the intact end, thereby causing it to be severed. (4142)

SPINNING OR TWISTING SPINDLE MOUNTING. J. J. Keyser. BP 861 011, Feb. 15, 1961. Through BCIRA 41: 2122 (1961).
A universal spindle is disposed axially and radially in the equatorial zone of an imaginary sphere, the spindle shank is tubular so that it can be driven internally or externally, the driving forces are disposed in or symmetrically with the equatorial zone, the axial and radial mounting is the only mounting point of the spindle, and means for damping the oscillations are located symmetrically with the equatorial plane. (4143)

RING SPINNING FRAMES. A. E. Whitehead (to Carrier Eng. Co. Ltd). BP 857 613, Jan. 4, 1961. Through BCIRA 41: 1856 (1961).
The ring frames are fitted with an underclearer and a suction header for the lower, front, fluted roller, and provides a bracket support for the header whereby this and the underclearer may be separately taken out of the frame for cleaning. (4144)

ELECTRIC DRIVING MEANS FOR SPINNING, DOUBLING, AND TWISTING MACHINES. F. Wright (to Prince-Smith & Stells Ltd). BP 859 159, Jan. 18, 1961. Through BCIRA 41: 2126 (1961).
The spindles, rollers, and building motion are driven electrically, without the use of belts or tapes, thus saving much floor space in the mill. (4145)

ARRANGEMENT FOR COMPENSATING FOR RING RAIL EXPANSION IN SPINNING MACHINES. Brevets Aero-Mecaniques SA. BP 859 165, Jan. 18, 1961. Summary in BCIRA 41: 2121 (1961). (4146)

HAND TOOL FOR APPLYING STACKED TRAVELERS ONTO THE RINGS OF SPINNING FRAMES. Brücker AG. BP 859 273, Jan. 18, 1961. Summary in BCIRA 41: 2129 (1961). (4147)

DOFFING AND DONNING DEVICE FOR SPINNING, TWISTING, AND DOUBLING MACHINES. F. W. A. Scriven. BP 859 631, Jan. 25, 1961. Through BCIRA 41: 2130 (1961).
Device for gripping full cops comprises a series of spaced, pivoted members each of which can be resiliently urged into engagement with the small end of the cop and a series of spaced, forked members for supporting the large end of the cop. (4148)

SPINDLE DRIVE. J. R. Foster (to T. M. M. (Research) Ltd). BP 859 715, Jan. 25, 1961. Summary in BCIRA 41: 2125 (1961).
The spindles are driven in adjacent pairs by a common endless tape or band. (4149)

STOP MOTION FOR SPINNING MACHINES. H. Scowcroft (to T. M. M. (Research) Ltd). BP 860 249, Feb. 1, 1961. Through BCIRA 41: 2127 (1961).
A conductor bar is drilled at intervals to provide bearings for pivots, each of which supports a wire feeler on the outer face of the bar and a contact shoe on the inner face, which is parallel to a contact plate. The feeler is normally held in an inoperative position by the yarn but if this slackens or breaks it turns on the pivot and its shoe closes a circuit between the bar and the contact plate and a switch is operated (through a relay) to stop the machine. (4150)

SUPPORT MEANS FOR FALSE TWIST TUBES. Zwirnerei Ackerman Werk der Ackerman-Goggingen AG. BP 860 369, Feb. 1, 1961. Through BCIRA 41: 2124 (1961).
A false twist tube is constituted by the armature of a horse-shoe magnet with wedge-shaped pole shoes, and the drive mechanism is interposed between the magnet and the tube and makes tangential contact with the tube. (4151)

SPINNING MACHINE FRAME. Soc. Alsacienne de Constructions Mecaniques. BP 869 263, May 31, 1961.
See abstr. 1190/60 (USP 2 923 119). (4152)

FALSE TWIST CRIMPING SPINDLE. NV Onderzoekingsinst. Research. BP 860 416, Feb. 1, 1961. Through BCIRA 41: 2123 (1961).
The cylinder of synthetic sapphire, diamond or agate (claimed in the parent invention, abstr. 3964/59) is mounted in the end of an extension piece of the rotatable tube. (4153)

SPINNING RING LUBRICATION. Herr Mfg. Co. Inc. BP 861 143, Feb. 15, 1961. Through BCIRA 41: 2128 (1961).
The invention relates to means for applying lubricant as a uniform thin film to the ring. The ring is formed of two parts, pressed together so that a capillary seam is created in an upright bearing surface on the inner face of the ring. As the traveler runs over the seam it exerts suction that cooperates with the capillary action. (4154)

TWO-FOR-ONE TWISTING MACHINES. F. Wright (to Prince-Smith & Stells Ltd). BP 871 849, July 5, 1961.
Means for stopping the machine due to the feeding of only one supply yarn or loss of tension or breakage of the folded yarn. (4155)

SPINNING MACHINE DRAFTING MECHANISM. J. J. Rieter & Cie AG. BP 871 873, July 5, 1961.
In a drafting arrangement consisting of at least two groups of rollers, at least one of the groups is swingably supported below the drafting field so that the distance between nips can be changed without changing the drafting conditions. (4156)

RING AND RAIL ASSEMBLY FOR SPINNING AND DOUBLING MACHINES. W. N. Evans (to BTR Inds. Ltd). BP 871 889, July 5, 1961.
The ring is supported out of direct contact with the rail by an annulus of rubber secured between the outside of the ring and the inside of the ring rail. (4157)

FALSE-TWISTING APPARATUS FOR PRODUCING YARNS WITH OPPOSED TORQUES AND OPPOSED TWISTS. Fluflon Ltd. BP 872 889, July 12, 1961. (4158)

CENTRIFUGAL SPINNING OR TWISTING CAN LID FASTENING. Industrie-Werke Karlsruhe AG. BP 872 974, July 19, 1961. (4159)

SUCTION DEVICES FOR REMOVING FLY AND DUST FROM SPINNING MACHINE DRAFTING MECHANISMS. J. J. Rieter & Cie AG. BP 873 154, July 19, 1961.
The air current for removing the fly travels approximately parallel to the drafting rolls. (4160)

APPARATUS FOR CLEANING SPINNING FRAMES AND SIMULTANEOUSLY DISSIPATING THE HEAT PRODUCED BY THEIR MOTORS. Luwa AG. BP 873 235, July 19, 1961. (4161)

SPINDLE DRIVE FOR DOUBLE-SIDED SPINNING AND TWISTING FRAMES. R. Wieschebrink (Germany). BP 873 260, July 19, 1961. (4162)

SUPPORTING SUCTION TUBES IN SPINNING MACHINES FOR BROKEN END REMOVAL. H. Fischer (Germany). BP 873 783, July 26, 1961. (4163)

DRAFT CONTROL APPARATUS FOR SPINNING MACHINES. K.-H. Breitenbach (to SKF Kugellagerfabriken GmbH). USP 2 982 083, May 2, 1961.
Means for adjusting the speeds of rotation of all of the rolls of a drafting machine for controlling predrafting, main drafting, total drafting and the rate of delivery of yarn to the spinning section of the machine. (4164)

HIGH SPEED WINDING MACHINE FOR GLASS FIBER STRANDS. P. J. Frickert (to Owens-Corning Fiberglas Corp.). USP 2 983 025, May 9, 1961. (4165)

AUTOMATIC APPARATUS FOR WINDING CONTINUOUS STRANDS OF SLIVER OR ROVING. G. Werner and H. Basler (to Hanseatische Motoren GmbH). USP 2 983 456, May 9, 1961. (4166)

SUPPORT FOR TOP DRAFTING ROLL CARRIER ARM OF A SPINNING MACHINE. K. Schrotz (to SKF Kugellagerfabriken GmbH). USP 2 984 873, May 23, 1961. (4167)

YARN SUPPLY MEANS FOR TWISTING MACHINES. E. Bates (to Prince-Smith & Stells Ltd). USP 2 984 964, May 23, 1961.
In conjunction with the mounting for each package on the creel there is provided a pivotal tension arm with a guide-eye for receiving the yarn drawn from the package. A constant tension is imparted to the yarn due to the alignment of the guide-eye with the side of the package. (4168)

APPARATUS FOR PLYING YARNS FROM MULTIPLE END BEAM. R. J. Clarkson (to U. S. Rubber Co.). USP 2 986 865, June 6, 1961. (4169)

TRANSFER TAIL ANCHORING DEVICE FOR BOBBINS. L. W. Hayes and A. L. Gottily (to Chemstrand Corp.). USP 2 987 267, June 6, 1961. (4170)

SULFURIZED SPINNING RING. J. H. Foard (to Kluttz Machine & Foundry Co.). USP 2 987 871, June 13, 1961.
Higher traveler speeds with reduced friction are made possible by treating a cast iron ring with molten sulfur to incorporate sulfur into the cast iron and impart lubricity to the ring surface. (4171)

STOP MOTION DEVICE. J. M. Ashe. USP 2 989 796, June 27, 1961.
Photoelectric device for detecting yarn breakages or variations in thickness or density and initiating a switch to stop the machine. (4172)

TWISTING SPINDLE BALLOON CONTROL. A. W. Vibber. USP 2 989 837, June 27, 1961.
Apparatus for continuously measuring the diameter of a twisting balloon and automatically controlling the diameter by varying the tension in accordance with the measurements. (4173)

TURBINE DRIVEN FALSE TWIST SPINDLE. R. G. Stoll and H. R. Stucki (to Celanese Corp.). USP 2 990 674, July 4, 1961. (4174)

BREAKAGE DETECTOR FOR YARN TWISTING. V. C. Rees (to Johns-Manville Fiber Glass Inc.). USP 2 990 675, July 4, 1961. (4175)

Yarns B5

ANTI-SNARL DEVICE. K. Mamnicki and T. S. Nutting (to Hosiery & Allied Trades Research Assoc.). BP 854 262, Nov. 16, 1960. Through BCIRA 41: 1634 (1961).
An anti-snarl device for use in drawing off yarn from a wound package comprises a cylindrical metal sleeve that can be plugged into or otherwise fixed to the top of the package core (cone, bobbin, etc.) and a ring that slips over the sleeve but is prevented from falling off by a rim. The yarn is drawn between the ring and the sleeve. The ring is of predetermined weight to suit particular yarns. An adaptor may be used to fit the sleeve to different packages. (4176)

COMPOSITE YARNS OR CORDS. Z. K. Porczynski (to Brit. Belting & Asbestos Ltd). BP 854 279, Nov. 16, 1960. Through BCIRA 41: 1616 (1961).
A continuous-filament yarn is doubled with a twisted staple fiber yarn or low-twist roving to produce an intermediate yarn in which the short fibers are untwisted and disposed helically around the filament yarn. Two or more of the intermediate yarns are then cabled together, with relatively low twist in the reverse direction to the doubling twist. In the resultant composite yarn the staple fiber is relatively loose but bound in and reinforced by the continuous filament component. (4177)

COARSE, TWISTED MULTICOLOR STAPLE FIBER YARNS. S. Roscoe (to Hayeshaw Ltd). BP 855 666, Dec. 7, 1960. Through BCIRA 41: 1861 (1961).
A coarse yarn that varies in color along its length (for carpets and heavy furnishing fabrics) is made by drafting and twisting together fibers that differ in color or affinity for dyes. One type (in sliver, roving, or wool top form) is fed to the drafting device at higher and lower speeds alternately and the rate of feed of the other components is timed so that while the color changes the yarn diameter remains constant. (4178)

APPARATUS FOR PRODUCING BULKED YARN. F. Scragg (to E. Scragg & Sons Ltd). BP 858 438, Jan. 11, 1961. Through BCIRA 41: 1866 (1961).
The invention is concerned with the conversion of a bundle of thermoplastic monofilaments into a moderately bulked yarn resembling yarn spun from natural fibers. The process is essentially the false-twisting of the heated bundle and an uptwister is adapted for the purpose. (4179)

YARN PACKAGES. Duplan of Canada Ltd. BP 860 368, Feb. 1, 1961. Through BCIRA 41: 2139 (1961).
In the shrink treatment of yarn on wound packages the inadequacies of wire coil, wood and paper cores under the crushing stresses are overcome by winding the yarn on only a central length of a smooth, compressed paper tube bonded with resin. After the shrinkage treatment, this length of the tube suffers reduction in diameter uniformly and the free ends are outwardly flared. (4180)

CRIMPED SHEATH AND CORE FILAMENTS. A. L. Breen (to E. I. du Pont de Nemours & Co.). USP 2 987 797, June 13, 1961.
The self-crimping filament consists of a kidney-shaped core surrounded by a sheath. (4181)

BULKED YARNS. Heberlein & Co. AG. BP 861 108, Feb. 15, 1961. Through BCIRA 41: 2134 (1961).
In a process for making bulked yarns, a yarn is forwarded at high speed through a nozzle by means of a plasticizing medium (hot air, steam) and then allowed to strike against a solid surface whereby the yarn is deformed and the medium is dispersed. The yarn reverts to its non-plastic condition but is set as a bulked yarn. (4182)

AIR JET APPARATUS FOR THE PRODUCTION OF BULK YARNS. Can. Celanese Ltd. BP 872 234, July 5, 1961. (4183)

YARN PACKAGE FOR LIQUID OR GASEOUS TREATMENT. H. Buddecke (Germany). BP 872 649, July 12, 1961.
The package consists of a number of layers each wound in equal flat coils arranged so that the upper rim of one coil overlaps the lower rim of the adjacent one. The layers are arranged so that the direction of windings in one layer is at a 90° angle to those in the adjacent layer. The yarn package is surrounded by a cylindrical or prismatic casing or bag, the walls of which are permeable to the treating agent. (4184)

APPARATUS FOR APPLYING VENT YARNS TO TIRE CORD FABRICS. R. F. Cooper and J. R. Yoho (to B. F. Goodrich Co.). USP 2 984 196, May 16, 1961. (4185)

MOLDED CHEESE CORE. H. G. Mason (to Barber-Colman Co.). USP 2 985 403, May 23, 1961. (4186)

HIGH BULK FABRICS FROM STAPLE FIBER MIXTURES. A. J. Weldon (to E. I. du Pont de Nemours & Co.). USP 2 985 940, May 30, 1961.
The fabric is woven from composite yarns containing fibers of both low and high residual shrinkage and then subjected to a shrinkage treatment. (4187)

APPARATUS FOR STRAND PACKAGING. R. C. Jackson and H. E. Haigler (to Chemstrand Corp.). USP 2 986 781, June 6, 1961.
Apparatus for feeding yarn, sliver, filament, or tow into a container and laying them in smooth, superimposed plaits or folds. (4188)

MANUFACTURE OF COMPOSITE BOUCLE VISCOSE YARNS. E. E. Tallis and E. V. Reeves (to Courtaulds Ltd). USP 2 986 868, June 6, 1961.
See abstr. 1881/59 (BP 808 137). (4189)

TIRE CORD STRUCTURE. H. A. Toulmin, Jr. (to Commonwealth Eng. Co.). USP 2 987 095, June 6, 1961.
The tire cord is formed of nylon strands gas plated with metal to form a toothed, uniformly rough surface to increase rubber adhesion. (4190)

PROCESS AND APPARATUS FOR PRODUCING CORE YARNS. E. M. Adkins, Jr. (to Celanese Corp.). USP 2 990 673, July 4, 1961.
A pair of spaced, staple fiber rovings are fed through the drafting rolls of a spinning frame to the balloon guide of a ring twisting device. The yarn constituting the core is fed between the rovings to the balloon guide, combined with the drafted roving, and the resultant product is twisted as it passes to the spinning bobbin to produce the core yarn. (4191)

FABRIC PRODUCTION C

BOBBIN CARRIERS FOR BRAIDING MACHINES. B. Carter (to B. & F. Carter & Co. Ltd). BP 872 679, July 12, 1961.
Detachable head for the back stem includes a captive clamping plate and a permanently attached abutment for the tensioning spring, so that removal of the head enables the spring to be changed for altering the tension. (4192)

YARN WAXING DEVICE. T. A. Purt and E. B. Bates (England). BP 873 716, July 26, 1961.
The yarn is run through a hollow container containing granules of wax and provided with aligned holes to permit the free passage of the running yarn. (4193)

Warping, slashing, yarn preparation C1

COP WINDING MACHINES. Walter Reiners (Germany). BP 855 074, Nov. 30, 1960. Through BCIRA 41: 1631 (1961).
To replenish exhausted supply packages, cops are automatically delivered from a compartmented magazine to a lower conveyor that is periodically advanced to an unwinding station including an inclined chute. The cop unwinding support is rockable from a receiving to an unwinding position between which a suction device comes into play to entrain the leading end of yarn on the new cop and a knot-tying device joins it to the trailing end of the takeup package. (4194)

COP WINDING MACHINES. Walter Reiners. BP 855 958, Dec. 14, 1960. Through BCIRA 41: 1890 (1961).
In the automatic replacement of an exhausted cop by a full one, the cops are released one by one from a magazine. Each passes down a chute with the nose end up, held by a device depending from guide rails, and is received by a pin on a rockable arm, the pin entering the opening at the bottom of the cop. The leading end of the yarn is then grasped by a suction device on a rockable arm and presented to knot-tying mechanism. (4195)

CROSS-WINDING APPARATUS. N. H. Smith (to Abraham Smith & Son Ltd). BP 856 559, Dec. 21, 1960. Through BCIRA 41: 1889 (1961).
The traverse guide is attached to one end of a pivoted double-end lever, the other end of which is associated with a rotary cam that causes the pivot point to rise and fall as required to alter the arcuate traverse stroke. (4196)

DEVICE FOR DETECTING AND INDICATING KNOTS IN YARNS, THREADS, AND THE LIKE. G. H. Burton (to Burton Eng. Co. Ltd). BP 857 424, Dec. 29, 1960. Through BCIRA 41: 1893 (1961).
A knotlike defect in a yarn being used at speed is detected by running the yarn through an adjustable gap between a hardened roller (metallic or ceramic) and a pivoted feeler. Any rocking of the feeler actuates a visual signal. (4197)

WARP WINDING MACHINES. E. Brierley (Leesona Holt Ltd). BP 859 847, Jan. 25, 1961. Through BCIRA 41: 2140 (1961).
The yarn speed is varied as the package on the spindle builds up, without altering the speed of the driving member, by using an eddy current coupling (utilizing magnetic lines of force) that provides a slipping clutch that slips at certain torques. (4198)

WARP SIZING APPARATUS. J. C. Armistead (to Garnett & Sons Ltd and G. H. Langley Ltd). BP 857 702, Jan. 4, 1961. Through BCIRA 41: 1895 (1961).
The warp sheet is run over a roller that picks up size from a lower roller dipping in the size. Axial motion is imparted to the top roller so that the yarns are rolled over laterally and are coated evenly. The sized sheet is dried in a tall hot air chamber in which it passes up and down through narrow spaces. (4199)

YARN GUIDE SHIFTING IN AUTOMATIC BOBBIN WINDING. F. Cesar (to Totex Chrastava NP). BP 857 717, Jan. 4, 1961. Through BCIRA 41: 1892 (1961).
A tube for the passage of air is adapted to be closed at its mouth by the growing diameter of the package, and the falling pressure affects a diaphragm that communicates with the tube in such a way that a gear wheel and brake device are caused to shift the yarn guide. (4200)

YARN END CONTROL IN WINDING. R. H. Speakman (to Imp. Chem. Inds. Ltd). BP 861 140, Feb. 15, 1961. Through BCIRA 41: 2138 (1961).
The yarn or filament is sucked into a tube until stable operating conditions are attained and then brought into contact with the receiving package. (4201)

AUTOMATIC BOBBIN WINDING MACHINES. W. Reiners (Germany). BP 872 222 and 872 598, July 5, 1961 and July 12, 1961.
In a winding machine having a plurality of winding stations, the thread restoration mechanism is operative only during the time when the winding station is in the zone of operation of the thread restoration mechanism and the relative movement of the two is automatically interrupted (872 222). The relative movement is interrupted only when a thread restoring operation has to be carried out (872 598). (4202)

YARN FEEDING DEVICE FOR WINDING FRAMES. G. W. Rushton and J. R. W. Barber (to Enoch Rushton & Sons Ltd). BP 872 485, July 12, 1961.
The yarn is guided from the supply package to the takeup package by an endless traveling band passing around two rollers driven in such a way as to prevent the exertion of tension on the yarn during winding. (4203)

CROSS-WINDING MACHINE. J. K. P. Mackie (to James Mackie & Sons Ltd). BP 872 608, July 12, 1961.
The tendency towards ribboning (circumferential ribs) in cross-wound packages is reduced or eliminated by (1) arranging for the taper of the package and that of the driving roll to be oppositely directed and (2) rocking the package so as to continually vary the driving ratio between the package and driving roll. (4204)

APPARATUS FOR AUTOMATICALLY WINDING COPS WITH UPPER AND LOWER WINDINGS. R. Gunter, J. Wohak, and R. Canzler (to Deutscher Spinnereimaschinenbau). BP 872 673, July 12, 1961. (4205)

TRAVERSE MECHANISM FOR BOBBIN WINDING. O. Haugwitz (to Geoffroy-Delore SA). USP 2 987 268, June 6, 1961.
The direction of operation is instantaneously reversed when the yarn reaches the end points of its path of travel by reversing the angular inclination of a biconical ring contacting the bobbin shaft and supported on its rim. (4206)

TENSION CONTROL DEVICE FOR UNWINDING YARNS FROM A SUPPLY SPOOL. G. Perrella (to Clix Fastener Corp.). USP 2 983 468, May 9, 1961. (4207)

CONE WINDING APPARATUS. G. H. Nelson and W. H. Newton (to Am. Viscose Corp.). USP 2 985 394, May 23, 1961.
Means for preventing the traverse mechanism from moving too far away from or "walking away" from the yarn package at intervals during yarn collection. (4208)

YARN WAXING ATTACHMENT FOR WINDING MACHINES. A. J. Redmond. USP 2 987 034, June 6, 1961.
The waxing attachment is applied to the yarn guide so that the yarn is waxed after it leaves the slub catcher but prior to winding. (4209)

YARN TENSION DEVICE FOR CREELS. W. Macdonald. USP 2 988 299, June 13, 1961.
The creel has a number of yarn guide bars at one end corresponding to a number of yarn supplying and tensioning units from which individual yarn ends may be led to guide openings in the guide bars. The creel may be threaded up and tensioning means adjusted prior to its use. (4210)

BOBBIN HOLDER FOR WINDING APPARATUS. E. Schüller and E. Hedtmann (to Barmer Maschinenfabrik AG). USP 2 989 257, June 20, 1961. (4211)

WINDING MACHINE TRAVERSING MECHANISM. L. L. Margason (to Pittsburgh Plate Glass Co.). USP 2 989 258, June 20, 1961. (4212)

Weaving C2

METHOD OF WEAVING BOX-SHAPED FABRICS. E. Koppelman. BP 854 222, Nov. 16, 1960. Through BCIRA 41: 1637 (1961).
In weaving fabrics that will fit a corner formed by three intersecting planes, or flat, folded fabrics that can be opened out into box-like structures and reinforced with plastics, two or more sheets of warp are shedded (e.g. on a Jacquard loom) and weft is inserted to unite them along predetermined lines, at least one of which runs diagonally. (4213)

LOOM PICKING MECHANISM. T. F. Rapp and R. J. Demartini (to Huyck Corp.). BP 854 970, Nov. 23, 1960. Through BCIRA 41: 1636 (1961).
The invention relates to the use of an electromagnetic clutch for transferring the energy of a fly-wheel to the picking mechanism of a very wide loom. It is possible manually to alter the timing of the energization and de-energization of, and also the flux density in, the electromagnet while the loom is running, so that optimum picking conditions are readily established or picks of different strengths can be made according to shedding conditions. (4214)

SETTING AIDS FOR LOOMS. Metapic SA. BP 856 005, Dec. 14, 1960. Through BCIRA 41: 1902 (1961).
Scales are used for (1) adjusting the height of the back rest, (2) setting the warp stop motion, (3) adjusting the initial position of the batten in relation to the heddle actuating mechanism, and (4) setting the end position of the shuttle. (4215)

SHUTTLE-CHANGING DEVICE. Valentin Patent-GmbH and Textilmaschinenfabrik Schwenningen GmbH. BP 857 066, Dec. 29, 1960. Through BCIRA 41: 1900 (1961).
Movements of the shuttle feeder actuate a link and swivel arm mechanism by means of which the upper part of the shuttle box is raised for the reception of a new shuttle and then lowered again. The swivel arm cooperates with a pivoted cam lever, the cam profile having parts that correspond with the raising and the lowering, respectively. (4216)

SPOOL SETTING FRAMES FOR AXMINSTER CARPET LOOMS. R. G. Perry. BP 858 816, Jan. 18, 1961. Summary in BCIRA 41: 2144 (1961). (4217)

LOOM WEFT MECHANISM. Textile Develop. & Machy. Ltd. BP 858 868, Jan. 18, 1961. Through BCIRA 41: 2141 (1961).
In a loom in which weft supplies are located at each side of the warp and weft is cut and carried by grippers to the shuttle, the number of sorts of weft is limited only by the heddle arrangement employed to feed the weft to the gripper. (4218)

WEFT THREAD GRIPPER SHUTTLES. V. Antl (to Vyzkumny Ustav Tvarecich Stroju a Technologie Tvareni). BP 860 167, Feb. 1, 1961. Through BCIRA 41: 2147 (1961).
Conventional weft insertion by gripper shuttles is noisy and the gripping jaws tend to accumulate dust. These disadvantages are overcome by using compressed air to propel the shuttle and to create suction for threading the weft into the open jaws. An electric device stops the loom if no weft is caught between the jaws. (4219)

JACQUARD FOR AXMINSTER CARPET LOOM. H. F. Lowe (to Brintons Ltd). BP 860 207, Feb. 1, 1961. Through BCIRA 41: 2148 (1961).
In a jacquard mechanism for controlling the yarn carriers of a gripper Axminster carpet loom, each lifter is fitted with n pegs arranged at equal intervals above one another and operated by (2n-1) horizontal needles (n being the number of colors of yarn in each carrier). (4220)

PILE FABRICS. T. W. Millward. BP 860 251, Feb. 1, 1961. Through BCIRA 41: 2143 (1961).
In a loom for weaving pile fabrics with warpwise wires the rear ends of which extend between the dents of a stationary reed, this reed comprises a front and back reed having resilient dents the upper ends of which are oscillated by a cam-operated pivoted rod. (4221)

PNEUMATIC WEFT INSERTION DEVICE FOR SHUTTLELESS LOOMS. V. Svaty. BP 860 970, Feb. 15, 1961. Through BCIRA 41: 2146 (1961).
The air jet is guided by a comb, carried by the lay and having flat teeth between which the warp ends pass. Each tooth has a conical aperture and the comb is reciprocated in the rhythm of the picking operation so that the apertures are aligned for the passage of the air jet and the weft. (4222)

ARRANGEMENT FOR UNWINDING WARP THREADS IN LOOMS. J. Picanol-Camps (France). BP 861 345, Feb. 15, 1961. Through BCIRA 41: 2142 (1961).
The warp beam is turned by a ratchet system controlled by the lay so as to execute a stroke of adjustable amplitude, increasing when the warp tension increases and vice versa. (4223)

DOUBLE-LIFT DOBBY DRAW HOOK CONTROL. Gebr. Staubli & Co. BP 871 947, July 5, 1961.
All draw hooks attached to the draw knife are lifted off the knife by the same element so that those hooks which, in accordance with the pattern, are not to be engaged by the knife are each held in raised position by a supporting element. (4224)

SELVAGE FORMATION IN SHUTTLES LOOMS. D. W. Shimwell (to Weaving Research & Textile Commn. Agents Ltd). BP 872 006, July 5, 1961.
In a loom in which reciprocatory spears insert the weft yarn in the warp shed in double pick form from opposite sides of the loom, the selvages are strengthened by tightening the loop of one set of weft yarns around the other weft loop to hold it firmly at the selvage. (4225)

SINGLE CYLINDER SELVAGE JACQUARD. J. Ashworth and M. Brown (to John T. Hardaker Ltd). BP 872 459, July 12, 1961.
The horizontal framework of the jacquard is adapted to be mounted on the side of the loom near its top so as to project a minimum distance above the loom top. (4226)

RIBBON LOOM WEFT MECHANISM. E. Redaelli (Italy). BP 872 570, July 12, 1961.
Automatic detection of weft thread exhaustion and replacement of filling bobbins. (4227)

APPARATUS FOR COLLECTING LINT AND FLY FROM LOOMS. A. J. Loepsinger (to Grinnell Corp.). USP 2 984 263, May 16, 1961.
The collection system is mounted directly on the loom under the stop motion mechanism and utilizes a high velocity air stream to form a low pressure area which draws the lint and fly to the desired collection point. (4228)

DOBBY DRAW HOOK CONTROL. E. Hoenig and W. Wicker (to Gebr. Staubli & Co.). USP 2 984 264, May 16, 1961.
The draw knife, which is about a pivot axis extending in the longitudinal plane of the knife, has a projection which fits into the recesses in the draw hooks so that the latter can be driven by the projection in both its directions of oscillation. (4229)

METHOD AND LOOM FOR WEAVING DOUBLE FACED AXMINSTER CARPETS WITH CUT AND UNCUT PILE. M. W. Worth (to James Lees & Sons Co.). USP 2 985 197, May 23, 1961; USP 2 986 174 and 2 986 175, May 30, 1961.
USP 2 985 197 relates to the loom attachment; 2 986 174 relates to the fabric construction; 2 986 175 relates to the method of weaving. (4230)

NONRAVELING SELVAGES FOR NARROW FABRICS. S. Eisen (to Bridgeport Fabrics Inc.). USP 2 986 171, May 30, 1961.
The selvage is formed by passing locking yarn loops through a first weft loop, through a subsequent weft loop, and then back through the two loops in the same order. (4231)

TENSION CONTROL MECHANISM FOR WIRELESS VELVET LOOM. H. J. Smiley (to James Lees & Sons Co.). USP 2 988 113, June 13, 1961. (4232)

LOOM WEFT DETECTING MECHANISM. C. R. Kronoff (to Crompton & Knowles Corp.). USP 2 986 172, May 30, 1961.
Means for preventing false initiation of the weft replenishing operation by overcoming the tendency of a side slipping weft detector finger to move angularly sideways when the carrier on which it is mounted moves forward during the weft replenishing operation. (4233)

WEAVING ELASTIC GRIP WAISTBANDS. H. Horowitz. USP 2 988 112, June 13, 1961.
Rubber threads of square or rectangular cross-section are fed in above the textile warp and the weft yarns are utilized to plate or superimpose the rubber warp on the textile warp. (4234)

LOOM REED FRAME FOR DENT WIRES ANCHORED IN AN ELASTIC MATRIX. C. E. Schmidt (to Schmidt Mfg. Co.). USP 2 989 088, June 20, 1961. (4235)

SHUTTLE EYES FOR AUTOMATIC PIRN CHANGING LOOMS. I. H. Thomas and A. Wrzesien (to Brit. Cotton Ind. Research Assoc.). USP 2 989 089, June 20, 1961.
In a shuttle eye with adjustably spring-loaded opposed plates for weft tension control, means for restraining movement of the weft parallel to the plate faces and for dampening vibration of the plates. (4236)

SELVAGE FORMING IN GRIPPER SHUTTLE LOOMS. E. Pfarrwaller (to Sulzer Freres SA). USP 2 990 854, July 4, 1961.
Apparatus for bending back alternate weft yarns into the shed to form a selvage which is considerably thinner than that made by conventional methods. (4237)

SHUTTLE THREADING BLOCK. A. Villani and J. W. Rankin (to Draper Corp.). USP 2 990 856, July 4, 1961. (4238)

Knitting C3

WARP KNITTING MACHINE FOR PILE FABRICS. C. F. Townsend (to Courtaulds Ltd). BP 871 815, July 5, 1961.
Stable pile fabric with slack floats is produced by removing the tension in the warp threads during underlap of the front guide bar. The slack floats form a curve, thus increasing the length of yarn between loops and providing more material for napping. (4239)

STRETCH SUPPORT HOSIERY. Alamance Inds. BP 871 833, July 5, 1961.
The stitch loops are formed of at least three independent, high torque yarns knitted together as a single yarn. While the torque direction of the yarns in any one course is the same, the torque direction in some courses may differ. (4240)

YARN SUPPLY TENSION COMPENSATORS FOR KNITTING MACHINE. C. G. Newton. BP 871 837, July 5, 1961.
See abstr. 4703/60 (USP 2 952 393). (4241)

STRAIGHT BAR KNITTING MACHINES. C. K. Willner. BP 872 162, July 5, 1961.
See abstr. 5052/60 (USP 2 957 324). (4242)

CIRCULAR KNITTING MACHINES. Franz Morat KG. BP 871 864, July 5, 1961.
The pattern wheel jacks are under the action of stressed springs and are brought into operating condition by the release of the springs by an electromagnet. (4243)

WARP KNIT FABRICS. P. Schönfeld and R. Schreckenbach (Germany). BP 871 866, July 5, 1961.
Means for producing warp knit fabrics with a transverse ribbing effect on a single needle row warp knitting machine. (4244)

YARN DELIVERY UNIT FOR KNITTING MACHINES. Franz Morat KG. BP 872 158, July 5, 1961.
The unit consists of a single roller with a smooth, hard cylindrical surface on which the yarn bears and which is driven at 3000 to 5000 rpm. (4245)

CIRCULAR HOSIERY MACHINE FOR SEAMLESS HOSIERY WITH REINFORCED HEELS, TOES, AND SOLES. Schubert & Salzer Maschinenfabrik AG. BP 872 375, July 5, 1961. (4246)

FABRIC TAKEUP MECHANISM FOR STRAIGHT-BAR KNITTING MACHINES. J. T. Wheeldon, B. A. Monk, and S. A. Monk (to I. & R. Morley Ltd and S. A. Monk Ltd). BP 872 431, July 12, 1961. (4247)

STRAIGHT BAR KNITTING APPARATUS FOR SELECTIVELY KNITTING IN PLAIN OR RIB FASHION. M. Philip. BP 873 308, July 19, 1961.
See abstr. 768/60 (USP 2 918 810). (4248)

TOE CLOSURE FOR CIRCULAR HOSIERY. J. C. Slane (to U. S. Trust Co.). USP 2 980 917, Apr. 25, 1961.
The invention relates to the formation of a gusset in the foot of the stocking prior to knitting the toe pocket to permit the seaming of the toe by a three thread, two needle overedge sewing machine. (4249)

WARP KNIT FABRIC. F. L. Aibel (to Gal Inc.). USP 2 985 002, May 23, 1961.
Fabrics of minimal thickness and extended yield with excellent covering quality are obtained by means of wales made up of contracted and elongated stitches with unknit floats inlaid in certain of the contracted stitches, and the stitches of adjacent wales connected by diagonally crossed laps. By varying the number and position of the lap crossings, fabrics of various textures are obtained. (4250)

DOUBLE PATTERNED TOP FOR CIRCULAR HOSIERY. A. O. Cormier (to Cormier Hosiery Mills). USP 2 986 025, May 30, 1961.
The tops include alternating sections, one comprising popcorn stitches and the other a coarse imitation rib stitch. (4251)

METHOD OF WARP KNITTING PILE FABRIC WITH MULTIPLE PILE PROJECTIONS. R. S. MacCaffray, Jr. (to C. H. Masland & Sons). USP 2 989 858, June 27, 1961.
The density of the pile is increased without a corresponding increase in backing stitch density by forming two pile loops in the same course from the same pile yarn, one of the loops being oriented walewise and one weftwise. (4252)

WARP KNITTING MACHINE DRIVE. K. Liebrandt and W. Schrader (Germany). USP 2 986 909, June 6, 1961.
The driving movements of all the knitting elements, e.g. presser bar, sinker, carrying guide, and eye needle, are carried out by means of a single drive shaft. (4253)

MULTIFEED CIRCULAR HOSIERY MACHINE. L. Ferraguti (Italy). USP 2 987 898, June 13, 1961.
Device for obtaining draw-stitch jacquard patterns with regular loops. (4254)

MULTIFEED CIRCULAR HOSIERY MACHINES. P. A. Mahler (to Singer-Fidelity, Inc.). USP 2 987 899 and 2 987 900, June 13, 1961.
Means for anchoring loose yarn ends, occasioned by changeover from dual to single feed knitting, into the fabric at the gore lines of the heel pocket. (4255)

OSCILLATING MOTION CIRCULAR KNITTING MACHINE. S. Mishcon (to Supreme Knitting Mach. Co.). USP 2 988 905, June 20, 1961.
Means for simultaneously knitting a series of independent trim strips characterized by three selvage edges. (4256)

FLAT WARP KNITTING MACHINE NEEDLE BAR DRIVE. A. W. H. Porter (to Hobourn F. N. F. Ltd). USP 2 988 906, June 20, 1961. (4257)

YARN GUIDING APPARATUS FOR CIRCULAR HOSIERY MACHINES. O. C. Bruce (to Princeton Hosiery Mills). USP 2 988 907, June 20, 1961.
Device for guiding a plating yarn during heel and toe formation so that it is fed to the needle cylinder in the same relationship to the conventional yarn regardless of the direction of rotation of the needle cylinder. (4258)

METHOD FOR OPERATING ON SWEATER BLANKS. W. Bleicher (to Trim Master Corp.). USP 2 989 018, June 20, 1961.
Mechanism for sewing binders or tapes to weft knit fabrics and slitting the fabric between the tapes. (4259)

VACUUM ATTACHMENT FOR DIAL LOOPING MACHINE. V. H. Butler (to Burlington Inds.). USP 2 989 935, June 27, 1961.
The vacuum attachment is adapted to engage and hold the stitching chain between the articles being seamed so that the chain is severed close to the fabric to obviate subsequent manual clipping. (4260)

DEVICE FOR SETTING THE JACKS OF A PATTERN WHEEL IN A CIRCULAR KNITTING MACHINE. R. Schmidt (to Franz Marat GmbH). USP 2 990 702, July 4, 1961. (4261)

GLOVE WARP KNITTING APPARATUS. M. Bialostok. USP 2 990 703, July 4, 1961. (4262)

STOCKING. J. J. Purcell. USP 2 990 704, July 4, 1961.
Hosiery with the moisture absorption of silk and the strength and uniformity of synthetic yarn consist of alternating courses of silk and synthetic yarns, the diameter of the silk being twice that of the synthetic yarn. (4263)

HOSIERY INSPECTION, TURNING, AND STACKING APPARATUS. T. H. De Spain (to So. Textile Machy. Co.). USP 2 990 982, July 4, 1961. (4264)

Fabrics C4

PATTERNED TUFTED PILE FABRIC. L. Pownall (to Brit. Nylon Spinners Ltd). BP 854 335, Nov. 16, 1960. Through BCIRA 41: 1641 (1961).
Pattern is introduced in tufted pile fabrics by using in some areas nylon yarn spun from pre-set fibers and in other areas nylon yarn that has been heat-set after spinning. Different shades are displayed on dyeing. Further effects are obtained by means of different heights of pile, by using different synthetic fibers, and by using yarns in some of which the fibers (by reason of the setting treatment) remain compacted together while in other yarns they stand out individually. (4265)

SYNTHETIC MATERIALS REINFORCED WITH FIBERS. Glaswerk Schuller GmbH. BP 855 548, Dec. 7, 1960. Through BCIRA 41: 1968 (1961).
Plastics may be reinforced with common alkaline glass fibers (5-20% alkali) if the fibers are first coated with an epoxide resin. (4266)

FIBER TEASING AND PAD-FORMING MACHINES. A. E. Callaghan (to A. E. Callaghan & Son Ltd). BP 855 854, Dec. 7, 1960. Through BCIRA 41: 1846 (1961).
A machine for teasing open fibers and forming them into pads comprises: a spiked drum or cylinder covered with sawtooth wire, working in a casing; and an air blast device for conveying the fiber from the drum to a vibrating, covered tray in which the pads are formed. (4267)

PREVENTION OF SLIP IN NYLON DRIVING BELTS BY RESIN IMPREGNATION. W. Heidinger and K. Wimmer (to VEB Leuna-Werke). BP 855 875, Dec. 7, 1960. Summary in BCIRA 41: 1976 (1961). (4268)

MANUFACTURE OF RIBBONS. A. Laszlo (to Jersey Fabrics Ltd). BP 856 440, Dec. 14, 1960. Through BCIRA 41: 1905 (1961).
Ribbon fabric is woven in multiple widths with soluble yarns separating the individual widths, batched up on a perforated cylinder for the usual finishing on a tenter, and then submitted to chemical treatment that dissolves the separating yarns. (4269)

BONDED NONWOVEN FABRICS. B. M. Glover (to Buckley & Co. Ltd). BP 856 870, Dec. 21, 1960. Through BCIRA 41: 1969 (1961).
A very thin web of fiber is folded upon itself to build up a number of layers during which a bonding agent (plastic or rubber) is applied by spraying. The assembly is passed through an intermingling machine in which smooth plungers with forked ends act to transfer fibers from some layers to others, and the bonding agent is then set or vulcanized. (4270)

APPARATUS FOR THE PRODUCTION OF POLYESTER RESIN-GLASS FIBER REINFORCED LAMINATES. Montecatini Soc. l'Industria Mineraria Chimica. BP 857 274, Dec. 29, 1960. Through BCIRA 41: 1966 (1961).
The invention relates particularly to the application of a polyester resin to a web of glass fiber. (4271)

APPARATUS FOR FORMING GLASS FIBER REINFORCED PLASTICS. D. F. Anderson (to Can. Ingersoll-Rand Co. Ltd). BP 857 144, Dec. 29, 1960. Through BCIRA 41: 1967 (1961).
Reinforced plastics are formed in a continuous operation by cutting roving into predetermined lengths, separating the lengths into constituent strands, coating these while suspended in air with a bonding agent, and continually projecting the coated strands in an organized, directable stream onto a form or mold. (4272)

METHOD OF PRODUCING LARGE-SURFACE MOLDINGS. W. Barthel, W. Reichelt, and K. Lang (to VEB Sachsenring Automobilwerke Zwickau). BP 858 493, Jan. 11, 1961. Through BCIRA 41: 1970 (1961).
Card web is sprinkled with the powdered resin, folded on itself zig-zag fashion several times, the layers are hot-pressed together, the edges are trimmed and the material is molded as desired, in a continuous operation. (4273)

METHOD OF WEAVING SILK-LIKE FABRICS. Mettler & Co. AG. BP 859 323, Jan. 18, 1961. Through BCIRA 41: 2149 (1961).
Fabrics resembling shantung are woven in sateen weave with a warp on two beams, one of plain cotton yarn and the other of fancy twist yarn with thick and thin places, and a weft of plain cotton yarn. (4274)

BUOYANT COTTON FABRICS FOR LIFE JACKETS, BELTS, PACKS, OR RUCKSACKS. M. Shaw. BP 859 498, Jan. 25, 1961. Through BCIRA 41: 2151 (1961).
The buoyancy compartments are defined by cotton fabrics that are permeable to air when dry (so that the garments may be squeezed flat and rolled up) but impermeable when wet so that the compartments may be inflated. Alternatively, the compartments may be filled with blocks of kapok. Cloth particulars are given. (4275)

MACHINES FOR MAKING TUFTED FABRICS. E. Pickering (to Cobble Bros. Machy. Co. Ltd). BP 859 761, Jan. 25, 1961. Through BCIRA 41: 2145 (1961).
In the needling of tufted bedspread, curtain and like fabrics, the tufting mechanism is run at constant speed but the mechanism for feeding the ground fabric can be driven at two speeds, the slower one resulting in normal close tufts or hobnails and the faster one in plain, non-tufted areas. (4276)

LOOP PILE TUFTING MACHINES. Cobble Bros. Machy. Co. Ltd. BP 871 852, July 5, 1961.
Device for stripping formed loops from their needles and preventing the loop from reentering the path of the needle and being speared or tagged on the next successive stitch. (4277)

APPARATUS FOR PRODUCING TUFTED FABRICS WITH CUT AND UNCUT LOOPS. J. K. McCutchen. BP 873 032, July 19, 1961. (4278)

APPARATUS FOR REINFORCING NONWOVEN FIBROUS FLEECES. A. Priller (to Forschungsinstitut fur Textiltechnologie). BP 873 405, July 26, 1961.
Transverse threads are inserted between relatively wide fibrous fleeces by means of an endless, rotating belt which introduces the threads running off bobbins of a rotating bobbin carrier disc. (4279)

REMOVING GRAPHITE FROM LACE. F. J. Graham (to Kayser-Bondor Ltd). BP 873 201, July 19, 1961.
The lace is impregnated with a dispersion of casein which is subsequently extracted. (4280)

DOUBLE FACED PILE CARPET. T. Schwenkglenks (Germany). BP 873 246, July 19, 1961.
In a carpet made up of 2 spaced sets of weft threads separated by at least one pile warp and two stuffer warps and a binding warp which binds together the weft threads, the pile warp protrudes on both sides of the carpet and may form different patterns on each side. (4281)

WOOL-LIKE BLENDED FABRICS FROM COTTON AND CRIMPED SYNTHETIC FILAMENTS. Heberlein & Co. AG. BP 873 282, July 19, 1961.
Smooth fabrics with good textile properties are obtained by treating the fabrics with aqueous caustic alkali of mercerizing concentration until shrinkage of cotton has taken place. The fabrics may be produced from a mixed spun yarn, from a yarn obtained by twisting together filament bundles and cotton roving, by alternate working of the yarns, or by working the yarns in side by side. (4282)

APPARATUS FOR SATURATING WEBS OF FELTED FIBERS. Texon Inc. BP 873 647, July 26, 1961. (4283)

SYNTHETIC FIBER PAPER. H. M. G. Williams (to Portals Ltd). BP 873 700, July 26, 1961.
The wet strength of paper containing synthetic fibers bonded with methyl methoxy nylon is improved by treating the paper with an aldehyde, oxalic acid, urea, or thiourea which can form cross-linkages between molecules of the binder. (4284)

APPARATUS AND METHOD FOR FORMING NONWOVEN GLASS FIBER MATS. R. G. Russell (to Owens-Corning Fiberglas Corp.). USP 2 981 999, May 2, 1961.
The glass fibers are accumulated and compressed on a collecting surface and subjected to gaseous blasts to cause interlocking of the fibers. (4285)

METHOD OF REORIENTING FIBERS AND BONDING. I. S. Ness and R. V. Lints (to Chicopee Mfg. Corp.). USP 2 982 667, May 2, 1961.
A web in which the fibers are predominantly oriented in the longitudinal direction is subjected to combined cross-stretching and longitudinal shrinking to reorient the fibers followed by bonding. (4286)

BONDING AGENT FOR PRODUCING SOLVENT- AND WASH-RESISTANT NONWOVEN FABRICS. N. A. Matlin and B. B. Kine (to Rohm & Haas Co.). USP 2 982 682, May 2, 1961.
The binder consists of a water-soluble aminoplast and a water-insoluble linear copolymer containing amino groups which is cross-linked to an insoluble condition in the final product. (4287)

FLAME AND ABRASION RESISTANT RISER FOR PARACHUTE. A. J. Steinthal (to M. Steinthal & Co.). USP 2 983 470, May 9, 1961.
The riser consists of several superimposed fabric straps enclosed in a sleeve of woven, flame resistant fabric, e.g. fiberglass or asbestos, coated with neoprene. (4288)

NONRAVELING SEAM FOR NAPPED, WOVEN FABRICS. J. H. Rogers (to Beacon Mfg. Co.). USP 2 983 027, May 9, 1961.
The warp is woven with the filling in a regular leno pattern and serves to form a secure seam structure fillingwise by interaction with the seaming stitch chains. (4289)

TUFTED CARPETS. P. M. Cole (to E. I. du Pont de Nemours & Co.). USP 2 983 028, May 9, 1961.
A carpet with a greater apparent depth than conventional carpets, utilizing less pile per unit area, is obtained by interposing a bracing web between the backing and the pile yarn peaks. The bracing sheet is preferably a resin impregnated woven nylon marquisette and the pile yarn passes through the bracing sheet at between 1/3-1/2 of the pile height. (4290)

GLASS FABRIC GASKET AND DIAPHRAGM MATERIAL. K. E. Thompson, Jr. (to E. I. du Pont de Nemours & Co.). USP 2 983 624, May 9, 1961.
The fabric is coated on both sides with a cured elastomeric copolymer of vinylidene fluoride and hexafluoropropene. (4291)

SYNTHETIC FIBER PAPER. H. M. G. Williams (to Portals Ltd). USP 2 983 627, May 9, 1961.
Paper of high flexibility and tear strength are prepared by impregnating a web of water leaf paper containing synthetic fibers with a solution of a methylmethoxy nylon derivative. (4292)

LAMINATED NONWOVEN CONVEYOR BELTING. L. A. Runton (to Russell Mfg. Co.). USP 2 983 636, May 9, 1961.
The belting consists of a center layer of corrugated, paperlike material bonded to outer layers of paperlike material by a foam rubber material reinforced with parallel yarns. (4293)

PAPERMAKERS WET FELT. H. M. Helland (to Lockport Felt Co.). USP 2 983 985 and 2 983 986, May 16, 1961.
The felt is composed of relatively soft plied parallel yarns interlocked by means of a braiding pattern so that each yarn follows a slightly zigzag course. (4294)

CONTINUOUS WRAPPED HOSE. A. L. Aymami, D. K. Lillich, J. R. Gibbons, and O. A. Moore (to Gates Rubber Co.). USP 2 984 262, May 16, 1961.
Method of wrapping continuous lengths of hose with several sheets of reinforcing fabric, without cutting the tube into segments, and splicing the fabric sheets together to form a continuous layer of a uniform number of plies. (4295)

FIRE RESISTANT NONWOVEN FABRICS. L. J. Goldbeck (to Kimberly-Clark Corp.). USP 2 985 540, May 23, 1961.
Fire resistant nonwoven webs from a blend of cellulosic and non-cellulosic manmade fibers are obtained by bonding the web with a mixture of a chloride-free elastomer and antimony trioxide and coating the product with a vinyl or vinylidene chloride polymer. (4296)

BLANKETS. W. P. Johnson, Jr. (to Beacon Mfg. Co.). USP 2 986 173, May 30, 1961.
Woven blanket in which a selected area incorporates a modified arrangement of filling yarns to provide greater warmth than the rest of the blanket. (4297)

NONWOVEN FABRICS FOR USE IN REINFORCING LAMINATES. R. G. Riedesel and R. E. Brink (to Minn. Mining & Mfg. Co.). USP 2 985 941, May 30, 1961.
The fabric consists of closely spaced weft yarns held only at widely separated selvage edges by closely spaced interwoven warp threads which may be removed after lamination. (4298)

DUAL YARN TUFTED CARPETS. H. F. Nowicki (to James Lees & Sons Co.). USP 2 985 942, May 30, 1961.
The fabric consists of rows of low pile yarns of low wear resistant synthetic fibers interspersed with rows of high pile yarns of high wear resistant wool. (4299)

APPARATUS FOR FORMING PATTERNED NONWOVEN CELLULOSE FABRICS. J. C. Bletzinger (to Kimberly-Clark Corp.). USP 2 986 780, June 6, 1961. (4300)

PROCESS FOR HARDENING FELTS. N. H. Koenig, L. R. Lefkowitz, and H. P. Lundgren (to U.S. Secy. Agri.). USP 2 986 798, June 6, 1961.
The felt is impregnated with dimethyl sulfoxide and heated until it develops the desired degree of hardness. (4301)

APPARATUS FOR MAKING TUFTED CARPETS. W. Felton (to David Crabtree & Son Ltd). USP 2 987 019, June 6, 1961.
The tufting material is introduced into the binding thread loops by means of a feed tube disposed within a loop-opening tube. (4302)

COATING GLASS FIBER STRANDS FOR USE IN REINFORCED LAMINATES. G. A. Stein (to A. O. Smith Corp.). USP 2 987 419, June 6, 1961.
The resin is applied in the form of high velocity particles to effect impregnation of the inner as well as outer fibers. (4303)

APPARATUS FOR DRYING AND BIAS CUTTING CONTINUOUS GLASS TUBULAR WOVEN FABRIC. W. W. Evans, L. E. Oliver, and C. R. Ronnquist (to Exeter Mfg. Co.). USP 2 987 796, June 13, 1961.
See also abstr. 1920/59 (USP 2 879 581). (4304)

COATED NYLON TARPAULIN FABRIC. G. L. Gatcomb (to E. I. du Pont de Nemours & Co.). USP 2 988 457, June 13, 1961.
The fabric is coated on one side with a neoprene composition and on the other with a chlorosulfonated polyethylene composition. (4305)

ORNAMENTAL BLANKS OF NONWOVEN FABRICS. W. R. Strickel and E. E. Kihlstrum (to Johnson & Johnson). USP 2 988 468, June 13, 1961.
Blanks of satisfactory loft, bulk, stiffness, and sewability for further processing are prepared so that their surface layers contain a higher concentration of fine fibers relative to an interior portion of coarse fibers. (4306)

TUFTING MACHINE FOR ORNAMENTAL BEDSPREADS. G. D. Dedmon (to Carolyn Chenilles, Inc.). USP 2 989 014, June 20, 1961. (4307)

SPRAYING TECHNIQUE FOR FORMING SHOT-FREE RETICULATED FIBER WEBS. P. C. Watson (to Am. Viscose Corp.). USP 2 988 469, June 13, 1961. (4308)

FURLIKE PILE FABRICS. W. L. White (to Collins & Aikman Corp.). USP 2 988 800, June 20, 1961.
Fabrics giving the effect of pieced-together natural furs are produced by applying heat to the back of a fabric composed of shrinkable and non-shrinkable fibers. (4309)

WOVEN DECORATIVE FABRIC. M. W. Heiss (to Cone Mills Corp.). USP 2 988 801, June 20, 1961.
Unusual visual effects are achieved by the use of nonuniform compactness of warp and weft yarns at predetermined intervals combined with nonuniform dyeing, napping, and overdyeing. (4310)

DECORATIVE COTTON BATTING. T. D. Cole (to Lockport Mills). USP 2 989 431, June 20, 1961.
Decorative, glittering particles deposited on the surface of a base layer of cotton batting are held in place by an adhesively bonded gossamer layer of cotton fibers. (4311)

WOVEN WICK TUBES FOR JOURNAL BOX LUBRICATION. L. E. Hoyer and J. R. L. Santos (to Am. Brake Shoe Co.). USP 2 989 992, June 27, 1961.
The wicking characteristics of the tube are improved by the use of terry warp threads projecting on one side of the tube and on the opposite side tightly woven filler and plain warp threads. (4312)

METHOD AND APPARATUS FOR BONDED FIBROUS MAT FROM CARD WEB. G. H. Sowers and E. H. Colesworthy (to Johns-Manville Fiber Glass Inc.). USP 2 990 004, June 27, 1961.
The card web is delivered into a forced air system which acts to disrupt the fibers into a haphazard relationship and simultaneously mix a binder with the fibers. (4313)

METHOD OF FORMING SURGICAL VASCULAR IMPLANTS. P. Demsyk. USP 2 990 605, July 4, 1961.
Rigid rods are inserted in flat, woven tubes of Dacron and the distended tube is subjected to superheated water vapor and steam at superatmospheric pressure. (4314)

GLASS FIBER REINFORCED LAMINATES. L. P. Biefeld (to Owens-Corning Fiberglas Corp.). USP 2 991 196, July 4, 1961.
The bonding of glass fibers in resin laminates is improved by treating the fibers during forming with an aqueous composition containing a butadiene-styrene copolymer and a lubricant. (4315)

FINISHING D

FINISHING MACHINERY. R. Augsten (Germany). BP 859 763, Jan. 25, 1961. Through BCIRA 41: 2175 (1961).
In apparatus for passing a liquid or drying gas through a fabric in a wet or drying process the material is run over a suction slot below which rotates a roller brush with its bristles projecting into the slot, which may be protected by a comb-like plate. (4316)

RESILIENT PADDING FOR LAUNDRY AND TEXTILE FINISHING MACHINE ROLLERS. R. Wilson (to D. & J. Tullis Ltd). BP 872 924, July 12, 1961.
The padding consists of convolutions of hollow, molded flexible tubing coiled closely around the circumference of a perforated hollow roller and arranged so that it can be internally pressurized to provide the requisite degree of hardness. (4317)

HOSIERY FINISHING METHOD. H. E. Brewin and G. H. Brewin (to Dyotherm Corp.). USP 2 990 087, June 27, 1961.
Simultaneous boarding, scouring, dyeing, and finishing is accomplished by treating the hosiery in an enclosed apparatus (see abstr. 378/60) with a treating solution containing a water base, dye, surface active agent, resin, lubricant, and chelating agent. (4318)

HIGH PRESSURE SYSTEM FOR HOSIERY FINISHING. W. Isken and W. Wiemer (Germany). USP 2 990 088, June 27, 1961. (4319)

Chemical processes D1

PROCESS FOR THE WET TREATMENT OF YARNS AND TEXTILE PIECE GOODS. J. Nüsslein (Germany). BP 854 221, Nov. 16, 1960. Through BCIRA 41: 1679 (1961).
The material is wound tightly on a perforated cylinder and the liquid is fed to the interior of the cylinder while this is rotating at a speed sufficient to force the liquid through the material. (4320)

PADDLE MACHINES FOR FABRIC WET PROCESSING. S. R. T. Freeman (to Freeman, Taylor Machines Ltd). BP 854 619, Nov. 23, 1960. Through BCIRA 41: 1678 (1961).
The inner parts of the blades of a rotary paddle for circulating the liquid and the goods are articulated to members by means of which the blades are pivoted to turnable components and thereby adjustable so as to increase or decrease the space between the paddle and the bottom of the tank to suit the particular goods. (4321)

CHLORITE BLEACHING. Farbenfabriken Bayer AG. BP 855 281, Nov. 30, 1960. Through BCIRA 41: 1676 (1961).
The material is impregnated with a neutral or weakly alkaline solution containing sodium chlorite and a minor amount of an amide, di-isopropylcarbodi-imide, amino acid, amino-sulfonic acid, or sulfaminic acid, mangled and steamed. (4322)

BLEACHING COMPOSITIONS. S. C. Bright and F. R. M. McDonnell (to Unilever Ltd). BP 855 735, Dec. 7, 1960. Through BCIRA 41: 2014 (1961).
Amides of the type of diacetyl-p-toluidine, diacetyl-p-chloroaniline, dibutyrylaniline, N-acetylcaprolactam, N-acetylphthalimide and N-acetylsaccharin are added as activating agents to detergents containing hydrogen peroxide or persalts. (4323)

OPTICAL WHITENING AGENTS. D. A. W. Adams and A. K. Sarkar (to Hickson & Welch Ltd). BP 855 784, Dec. 7, 1960. Through BCIRA 41: 1949 (1961).
The 27 claims are for compounds that contain stilbene, triazole, and pyrazolone systems. They are made by diazotizing a 4-aminostilbene-2-sulfonic acid, coupling with a pyrazolone, and oxidizing the resultant o-aminoazo dye. (4324)

CREASEPROOFING CELLULOSIC FABRICS. W. Taylor and R. E. Hunt (to Tootal Broadhurst Lee Co. Ltd). BP 855 509, Nov. 30, 1960. Through BCIRA 41: 1685 (1961).
Cellulosic fabrics acquire greater resistance to creasing if the proportion of formaldehyde to melamine used is increased above the normal, say from 3:1 to 6:1 (mols.), but that they suffer a reduction in ripping strength. This drawback is overcome by adding to the melamine/formaldehyde reagent a small proportion of a methylol derivative of an amide formed by the action of a higher fatty acid chloride on a polyethylene amine, e.g. Sapamine WP, Phobotex FT, or monomethylol stearamide. (4325)

METALIZED APPAREL FABRICS. G. E. Collins and W. H. Rees (to Brit. Cotton Ind. Research Assoc.). BP 856 341, Dec. 14, 1960. Through BCIRA 41: 1980 (1961).
The primary object of the invention is to produce an apparel fabric that has a low surface emissivity and a high reflectivity in respect of thermal radiation, and therefore a high Solar Protection Value, but is also porous and comfortable in wear. A thin metallic foil is spread over one surface of a porous basic fabric, usually with an adhesive, and the assembly is covered with a rubber sheet and mangled. The metal foil sticks to the fabric but is ruptured at sufficient crossings of the threads (or wire) to preserve the porosity. The broken fragments of metal are pushed into the interstices of the fabric. (4326)

FLAMEPROOFING CELLULOSIC MATERIAL. E. L. Donahue. BP 856 360, Dec. 14, 1960. Through BCIRA 41: 1981 (1961).
The material is saturated with a solution of urea phosphate containing pyridine or a substituted pyridine (e.g. bone oil), glycol mono-ethyl ether (Cellosolve) and a wetting agent, mangled, dried and baked at 305-340° F. The pyridine catalyzes esterification between the urea phosphate and the cellulose and the material is effectively flameproofed without loss of strength or handle. (4327)

PROCESS AND APPARATUS FOR MANUFACTURING FOAM IMPREGNATED FABRICS. D. Roberts (to Witco Chem. Co. Ltd). BP 856 389, Dec. 14, 1960. Through BCIRA 41: 1971 (1961).
In a continuous process, fabric (woven or nonwoven) is run past a station at which one face is coated with a foamed impregnant and then past a station at which suction is applied to the other face. (4328)

MOTHPROOFING AGENTS. Farbenfabriken Bayer AG. BP 856 452, Dec. 14, 1960. Through BCIRA 41: 1986 (1961).
Active agents are the products of the chlorination of chloroalkyl-, chloroaralkyl-, and chloroaryl-sulfonamides of aminodiphenylamines. (4329)

FABRIC AND POLYMER MODIFICATION BY MONOMER GRAFTING. G. Oster. BP 856 884, Dec. 21, 1960. Through BCIRA 41: 1975 (1961).
Textile fabrics and polyethylene sheeting are soaked in an organic activator capable of absorbing UV radiation, exposed to such radiation, and simultaneously or subsequently brought into contact with a monomeric vinyl or allyl derivative. Examples are given to show that polyethylene can be made to take a water ink, Orlon can be dyed with basic dyes and nylon with acid dyes, and rubber can be made to stick to cotton. (4330)

PATTERNED PLASTIC COATED FABRICS. Dornbusch & Co. BP 857 110, Dec. 29, 1960. Through BCIRA 41: 1972 (1961).
Means for spreading on a running fabric, according to a pattern, a synthetic plastic that remains workable over one range of temperature but is hardened at a higher temperature. The container for the paste, the spreading blade (forming the gapped, inclined bottom surface of the container) and the patterned printing roller are heated internally to keep the paste in the plastic state. (4331)

TEMPORARILY WATER RESISTANT PAPER AND FABRIC TISSUES. G. Schickedanz (Germany). BP 857 162, Dec. 29, 1960. Through BCIRA 41: 1984 (1961).
The tissue is sprayed with a solution containing (1) a hydroxylic colloid (methylcellulose, polyvinyl alcohol) and (2) an aldehyde resin, polyethyleneimine, or dicyandiamide. (4332)

APPARATUS FOR CONTINUOUS WET PROCESSING OF KNITTED FABRICS. A. W. P. Mackintosh. BP 857 225, Dec. 29, 1960. Through BCIRA 41: 1977 (1961).
Means for conveying knitted fabric through a succession of treatment vats without distortion. (4333)

PRODUCTION OF CONDENSATION PRODUCTS OF FORMALDEHYDE WITH UREA ON CELLULOSE. F. C. Wood, J. J. Ryan, P. J. Taylor, F. H. Burkitt, and M. Tuson (to Tootal Broadhurst Lee Co. Ltd). BP 857 283, Dec. 29, 1960. Through BCIRA 41: 1973 (1961).
Instead of using common alkali to catalyze the condensation, a polyethylene polyamine such as diethylene triamine or triethylene tetramine is employed, but in much lower concentration than hitherto. The finished textiles do not develop fishy odors. (4334)

COUNTERACTING THE FORMATION OF PRECIPITATES AND DISCOLORATIONS BY SEQUESTERING IRON IN AQUEOUS MEDIA. J. A. Benckiser GmbH. BP 857 518, Dec. 29, 1960. Through BCIRA 41: 1950 (1961).
The effects of iron in textile processing waters are overcome by the addition of a condensed metal phosphate, triethanolamine, and alkali to bring the pH to 10 or more. Sodium gluconate may also be added. (4335)

COMBINED OIL AND WATER REPELLENT TREATMENT. J. G. Evans, G. Landells, and G. W. Madaras (to Bradford Dyers' Assoc. Ltd). BP 858 022, Jan. 4, 1961. Through BCIRA 41: 1985 (1961).
Cellulosic materials are rendered oil- and water-repellent by treatment with a fluorocarbon compound (e.g. chromium complexes of fluorinated carboxylic acids known as Scotchgard) and a polyfunctional isocyanate. (4336)

OPEN WIDTH WASHING MACHINE. Benteler-Werke AG. BP 859 742, Jan. 25, 1961. Through BCIRA 41: 2173 (1961).
The material is run in festoon fashion over rollers above the level of the liquid and below alternate rollers well down in the liquid. In between it is rubbed and tensioned by two rows of noncircular, free rollers, one near the surface and one lower down. Each of these rollers acts on adjacent runs of the material, one going up and the other down, the material itself driving them. (4337)

FLAMEPROOFING CELLULOSE ACETATE TEXTILES. F. Ward (to Courtaulds Ltd). BP 858 582, Jan. 11, 1961. Through BCIRA 41: 1982 (1961).
The agent is bis-2-chloroethyl aminophosphonate. (4338)

FIRE RESISTANT BRATTICE CLOTH. D. B. Clarke (to Lindsay & Williams Ltd). BP 859 502, Jan. 25, 1961. Through BCIRA 41: 2190 (1961).
A brattice cloth is impregnated with a mixture of a polychloroprene, antimony trioxide and either chlorinated paraffin or chlorinated diphenyl. Zinc borate and/or tritolyl phosphate may also be added to the composition. (4339)

METHOD FOR SOFTENING SYNTHETIC TEXTILES. H. R. Hilfiker & Co. AG. BP 859 574, Jan. 25, 1961. Through BCIRA 41: 2185 (1961).
Materials made from fully set filaments (e.g. nylon stockings, tricot fabric or hanks) are run through a bath containing a shrinking agent (e.g. phenol) and in which ultrasonic waves in the range 20,000-60,000 cycles/sec are generated. The filaments become more elastic and softer and their frictional resistance is increased. (4340)

APPARATUS FOR WET TREATMENT OF TEXTILES. R. Augsten (Germany). BP 859 726, Jan. 25, 1961. Through BCIRA 41: 2174 (1961).
In the dyeing, bleaching, or other wet treatment of a running fabric or skein, the material is submitted to a succession of impacts from one side that cause it to make a succession of bends towards the liquid issuing from a slit-like nozzle on the other side. The material is more open and more easily penetrated at the bends. (4341)

LAUNDRY BLEACHING COMPOSITION. A. Slovak (to Newlands Bros. Mumford Ltd). BP 860 651, Feb. 8, 1961. Through BCIRA 41: 2217 (1961).
Chlorates and chlorites can be stored and transported safely if intimately mixed with a carbonate. A non-deliquescent laundry powder that yields chlorine and oxygen in an aqueous medium contains, for example, soda ash (50), sodium chlorite (25), sodium chlorate (20), and sodium persulfate (5). (4342)

METHOD FOR STABILIZING MATERIALS CONTAINING CELLULOSE FIBERS. J. Villadsen's Fabrikker AS. BP 860 992, Feb. 15, 1961. Through BCIRA 41: 2187 (1961).
The affinity of cellulosic materials for moisture is greatly reduced by treatment at 100-250° C with ketene, the increase in weight (which goes up with the temperature) being 4-30%. (4343)

RESIN FINISHING. H. M. Duckworth and W. S. Miller (to Calico Printers' Assoc. Ltd). BP 872 150, July 5, 1961.
The discoloration of fabrics treated with acetone/formaldehyde condensates is prevented by aftertreatment with an oxidizing agent. (4344)

WINCH MACHINE FOR WET PROCESSING YARNS AND FABRICS IN ROPE FORM. Gebr. Stork & Co. Apparatenfabriek NV. BP 873 642, July 26, 1961.
The material is subjected to a uniform progression of movement through the liquid upon which a reciprocatory movement is superimposed in such a manner that every portion of the material passes into the liquid an equal number of times. (4345)

ANTISTATIC AGENTS FOR POLYAMIDE FIBERS. Vereinigte Glanzstoff-Fabriken AG. BP 869 086, May 31, 1961.
Alkyl polyoxyethylene orthophosphoric acid esters obtained by reacting 1 mol of a metaphosphoric acid alkyl ester (in which the alkyl radical contains from 3 to 8 C atoms) with 1 mol of a polyethylene glycol are reacted with an alkylamine containing from 10 to 20 C atoms. (4346)

CELLULOSE TRIACETATE FABRICS OF IMPROVED SAFE IRONING TEMPERATURE. Brit. Celanese Ltd. BP 869 605, May 31, 1961.
The fabric is subjected to the action of one of the following at a temperature below 100° C: isopropyl alcohol; monohydric alcohol esters; acetic or propionic acids; caprolactam, γ-butyrolactone, urea, or fatty acid amides; mixtures of acetate, water, and a water-soluble thiocyanate; solutions of benzene carboxylic acids in fatty alcohols. (4347)

IMPROVING THE WHITENESS OF ACRYLIC FIBERS. Crylor Corp. BP 872 281, July 5, 1961.
The fabrics are impregnated with a solution containing a chlorate and an acid capable of liberating chloric acid from the chlorate and steamed. (4348)

WOOL SHRINKPROOFING. E. T. Fell and G. C. Gibbons (to Precision Processes Ltd). BP 872 292, July 5, 1961.
The fabrics are subjected to the action of an aqueous solution containing a permonosulfuric acid and a permanganate. (4349)

BLEACHING AGENT FOR CELLULOSE FABRICS. H. G. C. Fairweather (England). BP 872 553, July 12, 1961.
Solid hypochlorite bleach composition containing an optical brightener and suitable for home laundry use is claimed. (4350)

DEGUMMING RAMIE FIBERS. Can. Celanese Ltd. BP 872 800, July 12, 1961.
Decorticated ramie fibers are subjected to the oxidizing action of an aqueous solution of potassium permanganate and then to the reducing action of an aqueous solution of oxalic acid. (4351)

SETTING OF PLEATS IN WOOL FABRICS. A. W. Holmes (to Unilever Ltd). BP 872 828, July 12, 1961.
Improved setting of pleats is obtained by esterifying the fabric prior to setting by breaking the disulfide cross-linkages. (4352)

WATERPROOF SEAM FOR POLYVINYL CHLORIDE COATED FABRICS. H. L. Parsons (to Baxter Bros. & Co. Ltd). BP 873 347, July 26, 1961.
The seam is formed by placing between the two edges of the fabrics to be joined a strip or tape of a thermoplastic material having a melting point lower than the polyvinyl chloride, stitching, and heating to cause the strip or tape to melt and fill the spaces around the stitches. (4353)

CROSS-LINKED SHRINK AND CREASE RESISTANT CELLULOSE FABRICS. Rohm & Haas Co. BP 873 492, July 26, 1961.
Poly(vinyloxyalkyl)amine salts are claimed as cross-linking agents. (4354)

METAL COATED GLASS FIBERS. H. B. Whitehurst, A. R. Morrison, and T. J. Collier (to Owens-Corning Fiberglas Corp.). USP 2 979 424, Apr. 11, 1961.
Individual glass fibers are coated with a metallic salt which decomposes at elevated temperatures to form the corresponding metal on the glass fiber surfaces. (4355)

WOOL-LIKE CELLULOSIC TEXTILE MATERIALS. H. C. Gulledge (to E. I. du Pont de Nemours & Co.). USP 2 980 489 and 2 980 490, Apr. 18, 1961.
Cellulose textiles with the liveliness, crease resistance, and bulk characteristics of wool are obtained by: (1) reacting the cellulose under anhydrous conditions with an alkyl amine to form a swollen nitrogenous cellulose complex; (2) reacting the complex with a solution of mixed water hydrolyzable metal esters to form a highly tendered, metalized ester amine cellulose intermediate; and (3) subjecting the latter to contact with water to restore to the modified cellulose the tensile strength of the original cellulose material. (4356)

SIZING AGENTS. C. P. McClelland (to Union Carbide Corp.). USP 2 980 556, Apr. 18, 1961.
An aqueous solution of a water-soluble polyethylene oxide alone or mixed with a polyethylene glycol or starch and starch ethers is claimed for use with natural and synthetic filament yarns. (4357)

OPTICAL BRIGHTENING AGENT FOR USE IN DETERGENTS. A. G. Osborne (to E. I. du Pont de Nemours & Co.). USP 2 980 623, Apr. 18, 1961.
The incorporation of lower alkyl derivatives of (phenylenedivinylene) dipyridines in solid detergent compositions is claimed. (4358)

WATER-REPELLENT TREATMENT FOR CELLULOSE. W. L. Hochner and A. L. Scarbrough (to Nat. Lead Co.). USP 2 981 589, Apr. 25, 1961.
Cellulose fabrics are carboxyalkylated to convert 1/3 to 1/15 of the hydroxymethyl groups to carboxyalkoxymethyl groups and the modified cellulose obtained is further treated with a quaternary ammonium halide. (4359)

PROCESS FOR REDUCING THE TRANSLUCENCY OF WOVEN AND KNITTED NYLON FABRICS. E. Knup (to Ciba Ltd). USP 2 982 673, May 2, 1961.
The fabric is impregnated with an aqueous acid bath containing polyvinyl acetate emulsified with an anion-active dispersing agent and an aluminum salt capable of reversing the charge of the anion-active product. The impregnated fabric is dried and subjected to calendering at a raised temperature. (4360)

PEROXIDE BLEACHING OF CELLULOSIC FABRICS. F. X. Nerney, B. K. Easton, and N. Weinberg (to Food Machy. & Chem. Corp.). USP 2 983 568, May 9, 1961.
Rapid bleaching is achieved by impregnating the fabric with an alkaline aqueous peroxide solution and heating the wetted fabric by contact with a heated drying surface at 100-135° C for 20-90 sec. (4361)

STRONG, ROT-RESISTANT BENZYL CELLULOSE FIBERS. E. Klein, D. J. Stanonis, and P. Harbrink (to U. S. Secy. Agri.). USP 2 990 234, June 27, 1961.
Natural fibers, e.g. ramie and cotton, in the form of fibers, sliver, yarn or fabrics, are reacted with benzyl chloride and an alkali in the presence of a lower monohydric aliphatic alcohol. (4362)

FLAMEPROOFING AGENTS FOR CELLULOSE FIBERS DERIVED FROM METHYLOL PHOSPHORUS POLYMERS. H. Coates (to Albright & Wilson Ltd). USP 2 983 623, May 9, 1961.
The material is treated with a polymerizable methylol phosphorus polymer and then exposed to the action of gaseous ammonia followed by aqueous ammonia. (4363)

SOIL RESISTANT CELLULOSE FIBERS. J. W. Schappel (to Am. Viscose Corp.). USP 2 983 625, May 9, 1961.
The fibers are coated with silica and treated with alkylene oxide adducts of polyhydroxy alcohol esters of higher fatty esters. (4364)

ANTISTATIC AGENT FOR SYNTHETIC FIBERS. G. Hennemann and A. G. Lutgerhorst (to Am. Enka Corp.). USP 2 983 628, May 9, 1961.
The fibers and fabrics are treated with an aqueous solution of polyacrylic acid and a quaternary alkyl ammonium compound. (4365)

CARBON IMPREGNATED GAS RESISTANT FABRICS. S. N. Glarum and W. J. Thackston, Jr. (to Rohm & Haas Co.). USP 2 984 584, May 16, 1961.
Fabrics resistant to war gases are impregnated with a finely divided activated carbon bound with a water-soluble alginate and a water-insoluble acrylic resin. (4366)

WASH AND WEAR CELLULOSIC FABRICS. D. M. Gagarine (to Deering Milliken Research Corp.). USP 2 985 501, May 23, 1961.
Flat drying, wet crease resistant fabrics free of chlorine retention are obtained by reacting the fabrics in swollen condition with a cross-linking agent such that the cross linkage includes a chain of at least 3 C atoms. Specific cross-linking agents claimed are dihalohydrin, 1,3-dichloro-2-propanol, a mixture of 1,3-dichloro-2-propanol and 2,3-dichloropropanol, and epichlorohydrin. (4367)

GASEOUS METAL PLATING OF SYNTHETIC FIBERS. H. A. Toulmin, Jr. (to Union Carbide Corp.). USP 2 986 115, May 30, 1961.
The time and temperature of heating of the heat-decomposable gaseous metal compound in contact with the fibers is controlled to prevent softening or deterioration of the fibers. (4368)

Dyeing and printing D2

DYEING PROCESS. J. G. Kennedy and G. S. Roberts (to Whiffen & Sons Ltd). BP 854 341, Nov. 16, 1960. Through BCIRA 41: 1680 (1961).
Fabric impregnated with a diazotized amine and a coupler is rinsed in an acidified solution of urea all at a temperature below 30° C, and then entered into a bath at 60° C to effect coupling. (4369)

DYEING TEXTILE YARNS WITH VAT AND/OR SULFUR DYESTUFFS. A. Blum, E. Wilhem, W. Dietrich, and W. Kueppers (to Badische Anilin & Soda Fabrik AG). BP 855 494, Nov. 30, 1960. Through BCIRA 41: 1681 (1961).
Claims are made for the use as vat and sulfur dye reducing agents, especially in spray dyeing machines, of alkali salts of hydroxyalkylsulfinic acids (C_2 to C_4) or derivatives of ammonia in which at least one H is replaced by an alkylsulfinic acid residue. (4370)

PRODUCTION OF TRANSPARENT PRINTS ON TEXTILE FABRICS. Badische Anilin & Soda Fabrik AG. BP 854 582, Nov. 23, 1960. Through BCIRA 41: 1684 (1961).
An oil-in-water emulsion is used that contains 25-45% of a urea-, urethane-, or melamine-aldehyde resin etherified with a lower alcohol. This carbamic resin is dissolved in a lower alcohol and added to a hydrocarbon emulsion. (4371)

STEAMING APPARATUS FOR PRINT FIXING. C. M. von Hobe (Germany). BP 855 967, Dec. 14, 1960. Through BCIRA 41: 1958 (1961).
The fabric (e.g. a print, for fixation of the dye) is passed round a heated drum rotating in a box that is supplied with the vapor (e.g. steam). The drum is heated from within by a pump device that permits exact adjustment of the shell temperature, and the free space in the box is limited so that the radial distance from the casing to the drum is at all points less than the radius of the drum. Condensation is thus under strict control. For example, the shell temperature may be kept at 105° C and the vapor temperature at 100° C. Dyes are fixed in a minute or less and prints are sharp and clear. (4372)

WOOL DYEING PROCESS. Imp. Chem. Inds. Ltd. BP 869 150, May 31, 1961.
Washfast uniform shades are achieved by treating the wool with an aqueous medium containing an acid or acid salt, a surface active cationic agent, a soluble amine, alcohol, or phenol, and a reactive dye, e.g. chloro-s-triazinylamino dye. (4373)

FAST DYEINGS ON CELLULOSIC MATERIALS. Ciba Ltd. BP 869 549, May 31, 1961.
The cellulose fabrics are dyed with a dye containing at least one water-solubilizing group and one reactive amino group, the fabrics being treated, during or after dyeing, with a compound containing 2 epoxy groups or with 2:3-dibromobutane-diol-(1:4) and heated. (4374)

DYEING PROCESS FOR KNITTED TEXTILES. C. Kronsbein and F. Bellmann (to Bellfour fuer Verfahrens und Trocknungstechnik GmbH). USP 2 985 502, May 23, 1961.
Limited amounts of dyes are introduced into a closed system and sprayed onto the fabrics from nozzles. The dye not absorbed is collected and is continuously circulated and recirculated. The dyes are heated by a counterflow of steam while in the form of a spray emanating from the nozzles. (4375)

Mechanical processes D3

COLORED FLOCKED FABRICS. H. Haber (to Allied Textile Printers, Inc.). USP 2 981 588, Apr. 25, 1961.
Flocked fabric consisting of a polyester base and cellulosic flock bonded in selected areas to form an ornamental design is printed with a paste containing a reactive dye which reacts chemically only with the cellulosic flock. (4376)

WEB SLITTING AND REWINDING APPARATUS. L. Rockstrom (to Cameron Mach. Co.). USP 2 984 427, May 16, 1961.
Means for automatically compensating for the forces which tend to move the platen drum and rewind roll together or apart so that straight sided rolls of uniform density are produced. (4377)

TENSION CONTROL MECHANISM FOR WEB WINDING MACHINE. C. Aaron and L. Rockstrom (to Cameron Mach. Co.). USP 2 983 463, May 9, 1961. (4378)

SPOOL WINDING MACHINE FOR RIBBONS. J. J. Thayer. USP 2 984 425, May 16, 1961.
Machine for automatically transferring short lengths of ribbon from a reel to successive spools. (4379)

APPARATUS FOR REELING FABRICS. W. Bejeuhr and E. Unger. USP 2 985 397, May 23, 1961.
The side plates of the reel are provided with hooks for automatically moving inward to engage the fabric as it is fed into the reel from other finishing operations. (4380)

WEB SLITTING AND REWINDING DEVICE. L. Rockstrom and C. Aaron (to Cameron Mach. Co.). USP 2 985 398, May 23, 1961.
Platen drum with a resilient surface to ensure the peripheral engagement of the drum by all rewind rolls regardless of differences in their diameters. (4381)

Drying, setting, conditioning D4

SIEVE DRUM DRYERS. J. Fleissner, H. Fleissner, and G. Fleissner (Germany). BP 857 760, Jan. 4, 1961. Summary in BCIRA 41: 1987 (1961). (4382)

WILLOW OR SIEVE DRUM DRYER. J. E. Fleissner (to Fleissner & Sohn Maschinenfabrik). USP 2 981 007, Apr. 25, 1961.
The drying air is blown through nozzles on the outside of the material lying on perforated drums and is then conducted around the edge of the material to the inside of the drums. (4383)

ROTARY DRUM DRYING MACHINE. G. M. Marks (to Industrial Heat Eng. Co.). USP 2 984 472, May 16, 1961.
Each of the drying drums contains within it an elongated burner for the combustion of a mixture of air and a combustible gas and means for diffusing the products of the combustion. (4384)

MILL MANAGEMENT F

Plant and equipment F2

BEARINGS FOR LOOSE-BOSS ROLLERS. T. J. Williams (to Hoffmann Tweedales Ltd). BP 855 821, Dec. 7, 1960. Summary in BCIRA 41: 1858 (1961). (4385)

APPARATUS FOR CLEANING YARN CARRYING CYLINDERS OR ROLLERS OF TEXTILE MACHINES. Luwa AG. BP 855 957, Dec. 14, 1960. Through BCIRA 41: 1854 (1961).
The apparatus comprises a flexible tube, filled with foamed rubber, that presses against the roller and a suction device for removing the fibrous material that the tube rubs off. (4386)

SHAFT COUPLING. W. A. Seaton (to Brit. Nylon Spinners Ltd). BP 860 153, Feb. 1, 1961. Through BCIRA 41: 2120 (1961).
The aligned shafts are keyed to a split collar made of nylon. The central portion is concertina-shaped. (4387)